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Local and Global Perspectives on Mobility in the Eastern Mediterranean

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Edited by Ole Christian Aslaksen

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Contents

Introduction 1
Ole Christian Aslaksen

Revisiting Late Bronze Age oxhide ingots: Meanings, questions and perspectives 15
Serena Sabatini

The Mycenaeans and Europe: Long-distance networks and cross-cultural communication 63
Paulina Suchowska-Ducke

Engraving the ships. Shared ideas and practices 83
Katarina Streiffert Eikeland

Pottery as sign of cultural encounters: The case of Handmade Burnished and Grey Ware in Khania 111
Madelaine Miller

Communication and Trade at Tegea in the Bronze Age 135
Hege Agathe Bakke-Alisøy

Identities and 'precious' commodities at Midea and Dendra in the Mycenaean Argolid 159
Ann-Louise Schallin

Color, materiality, sensory experience and Late Bronze Age burials in the Argolid 191
Carole Gillis

Weaving Identities - Local and global customs between Early Iron Age Italy and Greece 231
Christoph Kremer

Adoring the past: Anthropomorphic art and body language in the Iron Age Mediterranean 253
Christian Mühlenbock

Greeks and the East in the Iron Age: Interpreting interaction in the Eastern Mediterranean 281
Kristoffer Momrak

Introduction

Ole Christian Aslaksen

Lately there has been an increased focus on mobility as an outcome of new theoretical and technological approaches, as well as the larger projects aimed at mobility, such as "Forging Identities",[1] a development recently discussed in detail by Kristiansen.[2] The volume is the result of a workshop held at the Norwegian Institute at Athens 11th-13th of November 2011. It addressed the different layers of mobility in the Bronze and Early Iron Age of the Eastern Mediterranean. It also concerns the intensity and scale of interaction and its role as a motor of change which represent key discourses in archaeology.[3]

The chapters in this volume deal with a great variety of materials in order to capture the multitude of connections and their impacts within and between the regions surrounding the Mediterranean. Frameworks used to explore the dynamics include Network Theory and World System Theory,[4] materiality theory[5] and theories of embodiment[6] to mention some. As such, it is a hope that this volume will inspire researchers whether they address mobility in what, in Meyer's words, could be described as a 'satellite perspective' or a 'microscope perspective'.[7] In addition to the chapters based on papers presented by Ann-Louise Schallin, Carole Gillis, Serena Sabatini, Paulina Suchowska-Ducke, Kristoffer Momrak, Hege

1. A joint project pursued by the University of Gothenburg, University of Aarhus, University of Cambridge, University of Southampton, University of Kiel, Free University of Berlin and the University of Thessaloniki 2009-2013, financed through EU FP 7
2. Kristiansen 2014, 13-14.
3. See Burmeister 2000; Harding 2013, 386; Kristiansen and Larsson 2005, Morris 2003; Schier 2013, 1-2.
4. E.g. Suchowska Ducke 2016.
5. E.g. Gillis 2016; Miller 2016; Kremer 2016.
6. Mühlenbock 2016.
7. Meyer 2008.

Bakke-Alisøy and Madelaine Miller at the workshop, additional contributions by Katharina Streiffert Eikeland, Christian Mühlenbock and Christoph Kremer were graciously provided for this volume.

The ten chapters could be divided into three sections along the main geographic scale addressed ('global' or 'local') and period (Bronze or Iron Age) by the authors. This would be a heuristic device as these scales are not exclusive but rather seek to investigate different aspects of mobility and may be regarded as complementary to each other.[8] For instance, a global scale gives the benefit of overarching perspectives, while the local provides a detailed view. Both need to be grasped in order to examine the extent and impact of Bronze Age networks.[9] Furthermore, the 'global' and the 'local' are not likely to have been separated analytically by the dwellers of the ancient societies of the Mediterranean hinterlands, whose everyday lives may have been tied to both spheres even if a 'global consciousness' may not always have been omnipresent or equally distributed.[10] The chapters of this volume cover a large geographic area, providing in a glimpse into how mobility was dealt with in Central Europe, Mycenaean Greece, the Levant, Cyprus and Southern Italy. The Iron Age is dealt with by Momrak, Mühlenbock and Kremer, adding a long-term temporal depth to the overarching theme mobility.

Global Perspectives

Sabatini presents a detailed study of the extensive geographical and temporal distribution of oxhide ingots, an object which circulated in different Bronze Age exchange and trade systems.[11] According to the author, the practical shape of the ingot made it suitable for transporting mainly copper but also tin. Sabatini divides the history of the oxhide ingot into three phases: 1600-1400 BC, 1400-1200 BC and 1200-1000 BC. In a long-term perspective, Sabatini discusses overarching trends; after an initial invention and a trans-European and trans-Mediterranean increase of metallurgic activities, in the "international period" (1400-1200 BC),[12] a centralising trend led to the rise of Cyprus as a main source of copper whereas in earlier periods there had been several. Later, there was a gradual shift towards the Central Mediterranean. In the last period the oxhide ingot was revived by

8. Meyer 2008, 57; see Kardulias and Hall 2008, 575.
9. See Meyer 2008.
10. See Harding 2013, 394.
11. Sabatini 2016.
12. See also Feldman 2004.

the Nuraghi culture of Sardinia, perhaps attempting a "brand-takeover".[13] Fringe areas like Northern Europe are also discussed, as well as representations of the ingots.

Suchowska-Ducke outlines the communication between the Eastern Mediterranean and Central Europe in light of a combination of Network Theory and World Systems. Communication is evinced by the co-presence of objects such as rapiers and Naue II Swords, and raw materials like amber, copper and tin.[14] Suchowska-Ducke identifies a series of developments of importance to the formation of inter-regional networks; in the period 2400/2300-2000 BC, Eastern Mediterranean and Central European pottery forms, prestige objects and metals appeared in inter-regional flows. Between 2000 to 1700/1600 BC, an intensification of production and mobility of precious and bulk materials (tin, copper and amber) that took place parallel to an increase of social stratification. Later, in the period 1700/1600-1300/1200 BC, the author defines extensive networks connecting, for example, Central Europe and Mycenaean Greece. The period was hallmarked by a consolidation of networks and development in Central Europe, and the cultural and economic expansion in Mycenaean Greece. After 1200 BC, the Late Mycenaean and the Urnfield cultures were formed as the Eastern Mediterranean powers declined and collapsed (e.g. the Hittite and the Mycenaean palatial cultures). According to Suchowska-Ducke, increased connectivity led to a spread of materials, objects, knowledge and ideas but also an unequal distribution of these between different regions.

Seafaring, a key component in Bronze Age trade, is further explored by Streiffert Eikeland in a study of sites with traces of maritime cults, for example rock art sites and sanctuaries.[15] In the temples of Kition, stone anchors with no signs of wear due to use were found.[16] In addition, ship graffiti was discovered. Houses in Hala Sultan Tekke also contained graffiti, with parallels found at Enkomi-Alasia. Ships carved in stone have been found in several contexts as far north as Scandinavia and east along the Caramel Ridge in northern Israel, often in a coastal setting, for instance, at Nami. Streiffert Eikeland provides a glimpse into the world of the travellers involved in the Eastern Mediterranean networks from an agent perspective.

13. Sabatini 2016; see also Kremer 2016; Sherratt and Sherratt 1993, 363, 367.
14. Suchowska-Ducke 2016. See also Kristiansen and Rowlands, eds., 1998.
15. Streiffert Eikeland 2016.
16. Streiffert Eikeland 2016.

Miller's chapter explores the significance of foreign objects, in this case the Handmade Burnished Ware found in Chania.[17] Prior to the LH IIIB period, Chania was a secondary centre which may have served, amongst other things, as a collection point for wool. In the LH IIIB period, several large architectural projects were initiated and international contacts were established. Chania became a maritime centre in a period of decline at Crete, a development that was parallel to the expansion of networks in mainland Greece to the Mediterranean. Towards the end of the period, an Italic connection gained importance. Thus, Chania was a place signified by cross-cultural encounters and, according to the author, was a site where people of different origins could have interacted. This is mirrored in the palimpsest assemblages of objects and influences from different parts of the Bronze Age World, as well as the appearance of hybrids.

Local Perspectives

Bakke-Alisøy seeks to highlight the role of overland journeys in the Tegean territory in a study that emphasises the remains of road structures, settlement patterns, means of transport, and imports which may have been brought to the Peloponnesian interior.[18] As Bakke-Alisøy shows, the inland networks of the Tegea plain were influenced by shifts in larger networks.[19] Compared to the Early Helladic period, the numbers of settlements in the Middle Helladic period was dwindling. In the Late Helladic period, the number rose again, and monumental graves were also built. The societies of the Tegean plain may have joined together in the undertaking of large-scale infrastructure projects such as dams; these types of constructions could also serve as roadways and enhance the Tegean capability of participating in the Bronze Age.

In her article, Schallin focuses on objects made of precious materials from the fortified site of Midea, comparing a key material to what has been uncovered in the graves of Dendra and other sites in the Argolid.[20] While raw materials like ivory were imported from afar, they could have been utilised in local identity strategies. Carved ivories depicting people and papyri motifs could conform to an 'Argolid style'. At one level, relief beads have been interpreted as an identity marker for the Mycenaeans at large. However, the carved demon motif, for example, displayed a slight difference in the manner of representations compared to similar specimens

17. Miller 2016.
18. Bakke-Alisøy 2016, 5.
19. Discussed in e.g. Suchowska-Ducke 2016 and Sabatini 2016.
20. Schallin 2016.

in Mycenae: the demon's features were more similar to an insect's rather than those of a beast. Simple glass beads were used across the Mycenaean sphere and were found at Midea as well. Schallin defines a Midean identity cross-cut by a larger Argolid and Mycenaean identity. Thus, a local production of such ornaments at Midea may be considered even if some were produced and circulated from Mycenae. An interesting dynamic may be noted as such objects were shared and yet also combined into local assemblages and included in identity strategies.

With the materiality of colours as a vantage point, Gillis examines grave goods in the Argolid. Factors such as shine and combinations of particular hues were utilised in the staging of burial rituals in which shared social experiences were produced amongst the onlookers.[21] Gillis notes that, while it may be impossible to grasp the original meaning behind the choice of colours, the 'affordability' of objects and the effect they have upon people may be investigated. Mycenaean crafters used advanced techniques such as the tinning of ceramic vessels to produce particular looks. Slight differences could have been a part of identity strategies of a local character. However, the overarching character of the assemblages and the look of the objects make them identifiable as 'Mycenaean'.

Iron Age Perspectives

Kremer directs the reader's attention towards the role of women in emergent networks in the early 1st millennium BC.[22] He notes that, even if some of the richest graves are female and contain precious items (like faience bead-disk necklaces and textile tools of precious materials), researchers rarely ascribe the buried an active role. In elite guest networks, providing gifts produced by the household may have been of essence – a field in which elite women could have had a strong impact. The supra-regional role women played in the emergent networks is approached by the author in a case study of Attic and Italian faience bead-disk necklaces and textile tools. The former reflected a shared taste of jewellery, the latter displayed localism in the choice of material. Kremer also notes that the practice of burying textile tools with the dead was common in both Italy and the Eastern Mediterranean. Locally, the "global", 'shared' items played a role in the creation of hierarchies.

In his chapter, Mühlenbock discusses the body language of figurines with upright raised arms in comparative study of objects from Cyprus and Crete.[23] These figurines have been dated to before the 2nd and 1st millennium BC, and are

21. Gillis 2016.
22. Kremer 2016.
23. Mühlenbock 2016.

an important part of the assemblages. This fact is exemplified by the 150 figurines from Enkomi dating to the 12th century BC. Sicilian sculpted, anthropomorphic cup handles have been dated to the 9th century BC by the author. Later figurines from Monte Polizzo date to the 6th century BC. Cypriote figurines with raised arms date to the Iron Age. While vastly different, both in terms of figural representation and context, both the Sicilian and Cypriote figurines use the same iconic gesture. While rooted in local traditions that went back to preceding periods, the trans-Mediterranean cohesion of figurine gestures may, according to the author, reflect an existence of a common koiné manifest in for example gestures.

Momrak discusses interaction theories in light of cases from both the Orient and Greece, drawing on both archaeological and written sources from Lefkandi, Naukratis, and Al-Mina.[24] Momrak maintains that previous research has had a tendency to describe either the Greeks or the Levantines as the active party in trans-regional interaction. In light of the presented material, Momrak discusses the strengths and weaknesses of different interaction models, such as World Systems Theory and Globalisation, and provides a critical view.

Reflections

A series of recent titles emphasises long-distance 'global' perspectives, for example, *Interweaving Worlds: Systemic Interactions in Eurasia, 7th to 1st Millennia BC*, *Exchange Networks and Local Transformations*. *Interaction and local change in Europe and the Mediterranean from the Bronze Age to the Iron Age*,[25] and *A Companion to Ethnicity in the Ancient Mediterranean*.[26] As early as 2003, Morris noted a move towards adopting trans-regional perspectives in Mediterranean archaeology.[27] Mobility has been highlighted by Kristiansen in a recent article in *Current Swedish Archaeology* as a cornerstone to what may be deemed a new paradigm in archaeology. According to Kristiansen, this paradigm will be characterised by factors like quantitative and science-based methods, the exploitation of 'big data' sets and large trans-national projects funded by the EU.[28]

Models emphasising short-distance mobility as a prime factor in past societies have increasingly been supplemented by long distance models.[29] Since the 1960s, models emphasising long-distance mobility received criticism from processual

24. Momrak 2016.
25. Wilkinson, Sherratt and Bennet 2011.
26. McInerney, ed., 2014.
27. Morris 2003.
28. Kristiansen 2014, 14, 17-19.
29. Kristiansen and Larsson 2005; Morris 2003; Momrak 2016.

archaeologists, and sweeping culture historical narratives of migrations were largely abandoned.[30] By the late 1970s, however, long-distance connections were reintroduced with World Systems Theory, an approach that has since been adopted in Mediterranean archaeology.[31] The discourse on World Systems Theory has developed significantly since it was first adapted by archaeologists, and it is recognised that several World Systems may have coexisted with unique and overlapping cycles and sub-cycles of trade and cultural exchange.[32] Network Theory has recently been adapted and represents an approach which allows researchers to move between the local and the global.[33] Post-colonial theory has provided archaeologists with tools to deal with the impacts of increased interaction as the proponents of this approach seek to understand subjects like the outcome of cross-cultural encounters.[34]

A minimalist view on economy and interaction, and a focus on the 'local', is often prevalent in the archaeologies of the Mediterranean.[35] However, the Mediterranean region contains a large archaeological material suited for studies of mobility and, thus, it could yield relevant cases for a future mobility-focused paradigm such as proposed by Kristiansen.[36] In the 2000s, the Mediterranean Sea has been discussed as an interconnected unit tied together by trade and power struggles over lines of communication between culturally different areas.[37] Several cases exemplify the connectivity implied by this model even if their geographic scopes vary: the Old Assyrian networks attested at Kanesh,[38] Swedish bronzes (which copper often originated in the Mediterranean),[39] blue glass beads,[40] and the trans-Mediterranean distribution of Mycenaean pottery in the Late Helladic period.[41] The widespread use of the oxhide ingot,[42] the distribution of similar ornaments in Iron Age female graves,[43] similar body languages represented in

30. See Schier 2013.
31. Harding 2013.
32. Sherratt 1993, 363; Kardulias and Hall 2008, 374-375; Beaujard 2011.
33. See Knappett 2011.
34. E.g. Knapp and Van Dommelen, eds., 2010
35. Morris 2003 provides a discussion on the minimalist views on interaction.
36. For a discussion of a new paradigm, see Kristiansen 2014, 14.
37. Horden and Purcell 2000, 24-25, 522; Morris 2003; Osborne 2007; van Dommelen 2005, 111. See Braudel 1975.
38. Larsen 1976.
39. Ling et al. 2013.
40. Varberg, Gratuze and Kaul 2014.
41. Wijngaarden 2002, 279-280.
42. Sabatini 2016.
43. Kremer 2016.

the figurine material,[44] and the spread of weapons and thus fighting styles also provide examples for the paradigm.[45] Network analysis,[46] political economy,[47] and World Systems,[48] represent approaches that have received renewed interest.[49] At the same time, the diversity in the archaeological materials encountered tells unique local stories, as shown in the localised use of colours, and the highly selective use of jewellery in the Mycenaean sphere.[50] Small differences in design languages could signify local, independent identities situated within larger identity complexes such as the 'Mycenaean'.[51]

In archaeology, scholars such as Susan and Andrew Sherratt have noted that formation like World Systems, developed continuously, for example resulting in an inclusion of the Western Mediterranean in the Early Iron Age in an Eastern Mediterranean system.[52] This development is mirrored in both Mühlenbock and Kremer's articles.[53] In Kremer's study, connections are studied by means of the grave goods included with Iron Age females, emphasising the movement of individuals, a topic also touched upon by Momrak.[54] In his article, Momrak notes that the mobile elite warriors would have travelled in groups which could have consisted of, for example, retainers and rowers. This is perhaps mirrored in the assemblage of the Uluburun wreck.[55] The traveller of the Bronze Age is also, for example, discussed in the works of Kristiansen and Larsson,[56] Hänsel,[57] Baines,[58] Moorey[59] and Monroe.[60] Travels would have generated multi-ethnicity, as noted by Miller and Burns.[61] Such environments could perhaps also have been

44. Mühlenbock 2016.
45. Suchowska Ducke 2016; Molloy 2008; Molloy 2010.
46. Suchowska Ducke 2016; see also Broodbank 2000; Knappett 2011; Malakin 2007; Tartaron 2013.
47. Pullen 2010; Christakis 2011; Andreou 2002; Privitera 2014; Earle and Kristiansen,eds., 2010.
48. Wilkinson, Sherratt and Bennet 2011; Parkinson and Galaty 2007; Kardulias and Hall 2008.
49. See e.g. Momrak 2016.
50. Schallin 2016
51. Gillis 2016; Scahllin 2016.
52. Sherratt and Sherratt 1993.
53. Kremer 2016; Mühlenbock 2016.
54. Momrak 2016.
55. Pulak 2008; Miller 2016.
56. Kristiansen and Larsson 2005.
57. Hänsel 2002.
58. Baines 2007.
59. Moorey 2001.
60. Monroe 2011.
61. Burns 2010; Miller 2016; see also Sherratt and Sherratt 1998, 336-337.

found in areas through which trade and exchange were channelled, for example, Macedonia,[62] Troy,[63] and Middle Bronze Age Kanesh.[64] As with ships like the Uluburun, these were places where ideas, taste, techniques, and technology were mediated and were the cosmopolite knowledge of the "foreign" was produced.[65] This may be shown by "material multi-culture" assemblages such as that of the Uluburun which contained objects from several different cultures. Although it should be stressed that the presence of a particular set of objects not necessarily reflect the presence of specific people with certaint identities, material culture can give a hint. Swords, for example mycenaean rapiers, has a specialized use and production that would require skills and knowledge.[66] As noted by Sandars, the distribution of weapons also reflects a distribution of fighting styles and tactics.[67] The shape of a sword demands a particular skill set and reflects a certain preference, the latter more easily transferred than the first, which would require a transfer of bodily knowledge from one agent ("teacher") to another ("student").[68] The cosmopolite knowledge needed to partake in such exchanges may have been a resource in itself of limited distribution amongst the people of the Bronze Age, just like access to the various networks must have varied regionally.[69]

Of key importance in the research on Bronze Age World Systems is that they may have been manifold, intertwined, and contained different sub-cycles – within which objects, knowledge and skills could have flowed.[70] The imprint of these can be found in material culture, to varying degrees, in Bronze Age communities. The Mycenaean rapier has a distribution that includes FYRO Macedonia, Bulgaria, and Albania, as well as the Uluburun ship off the coast of modern-day Turkey.[71] The rapier would have demanded a specific skill set to be wielded, judging from the distribution of the object type mostly prevalent in modern-day Greece.[72] The metals, the copper and tin, could have been imported, perhaps first in the shape

62. See esp. Kiriatzi et al. 1997 for a discussion on Mycenaean pottery production in Central Macedonia, which was distinct from the local types to the extent that they must have been made by other potters than those making the local wares.
63. Cline 2008, 13.
64. For a discussion on Kanesh, see Larsen 1976.
65. See Rowlands and Ling 2013; for a discussion on the ship as a middle ground, see Monroe 2011.
66. See Molloy 2008; Sandars 1983, 44.
67. Sandars 1983, 44.
68. For discussions on skills and weapons see Kristiansen 2002; Molloy 2008, 2010.
69. See Sherratt and Sherratt 1993; Morris 2003.
70. Sherratt and Sherratt 1993.
71. See Kilian-Dirlmeier 1993, fig.62; Harding 1995, fig. 48.
72. See Molloy 2008.

of oxhide ingots before being melted into a weapon. It could be said that such objects had what scholars of modern globalisation term complex geographies as it contains different layers, for example material, design, and production, each possibly connected to different regions.[73] It should be noted that the user of such an object would not necessarily be aware of all of these layers 'stored' within the artefact. In the case of the sword, it may have mostly played a very local role as a means to fend off enemies and help the user to maintain a position of power. On the other hand, the 'local' could be said to propel the 'global', the existence of such swords was contingent upon the existence of stable networks of exchange that involved metals, as well as other goods such as textiles, amber, woods, dye, salt, gold, finished objects, resins, and rare materials like iron (in the Bronze Age).[74] With trade and exchange come impulses,[75] something which may be reflected in a Bronze Age constituted by cultures hallmarked by distinctive local elements and regional variations, and, at the same time, shared forms co-present in very different communities.

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73. Dicken 2007.
74. See Kristiansen and Larsson 2005; Kristiansen 1998, 287-288.
75. Burns 2010.

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Revisiting Late Bronze Age oxhide ingots: Meanings, questions and perspectives

Serena Sabatini

The so called oxhide ingots from the Late Bronze Age are an intriguing class of objects from the Mediterranean. Their amazing number, spread, distribution and puzzling characteristics have long attracted scholars' attention. They provide a glimpse into the extraordinary complexity of the Mediterranean world during the 2nd half of the 2nd millennium BC as they were subjected to practices of production, exchange, transformation and use spreading from the Levantine coast to Sardinia. The Turkish shipwrecks from Uluburun and Cape Gelidonya leave no doubt about their use as means of transportation of copper and tin, but can we consider them to just be ingots? A review of their distribution pattern paired up with critical attention to the chronology of the phenomenon invites a reflection on the meaning of these objects.

Introduction

Oxhide ingots are well known in archaeological literature. They were used throughout the 2nd half of the 2nd millennium BC over a vast area stretching from Southern France and Sardinia to the west, Mesopotamia and Egypt to the east and extending as far north as Scandinavia (Fig. 1). This paper aims to provide a renewed overview of the known finds, in particular their chronology, while attempting to offer 'food for thought' to a long and lively debate.

Oxhide ingots were potentially not contemporaneously in use throughout their distribution area; analysis of the existing evidence offers a valuable insight into the process of the emergence, development and transformation of this class of material. The ingots inhabited the Mediterranean for about six centuries; while their significance as metal ingots (a means of transportation of copper or tin) might be considered unaltered throughout the whole period, considerable historical and political changes took place during their period of use. The fact that they were parts of different cargoes, like those on the Uluburun and Cape Gelidonya ships, shows how this class of material could be adapted to a variety of trade systems. Their origin, role and significance are matters of debate; it is clear, however, that oxhide ingots were accepted in geographically and culturally

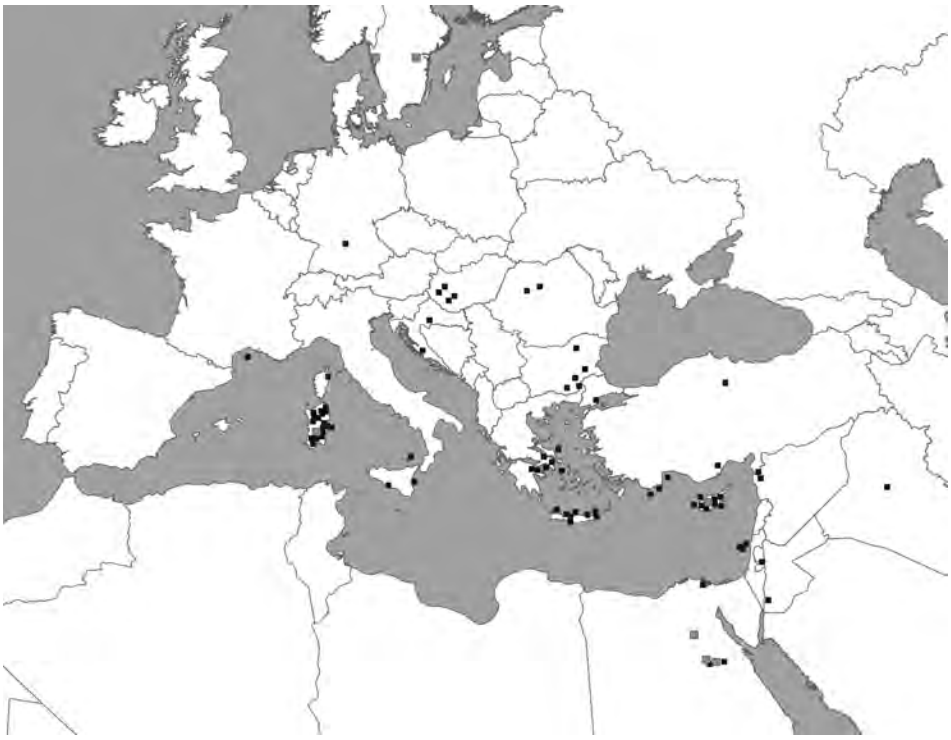


Fig. 1: *Distribution map of the oxhide ingots. Black squares: find spots of full sized and miniature oxhide ingots. Grey squares: find spots of oxhide ingot images. Images have been reproduced in several different ways such as on rock panels from Sweden, ceramics from Sardinia, various artefacts from Cyprus and paintings/reliefs in Egypt.*

separated environments. In other words they seem to be a prominent expression of networking and connectivity between people from different cultural and economic backgrounds. Their characteristics give additional potential to the possibility that they were a sort of brand commodity.

A few notes about oxhide ingots

It is not the aim of this paper to thoroughly discuss the class of material itself. Oxhide ingots can be described as copper and tin ingots in the form of rectangular slabs featuring more or less elongated corners which form a handle of sorts (Fig. 2a). The resemblance to the shape of a stretched ox-hide has led to their most commonly used name; however, it is generally acknowledged that their shape was

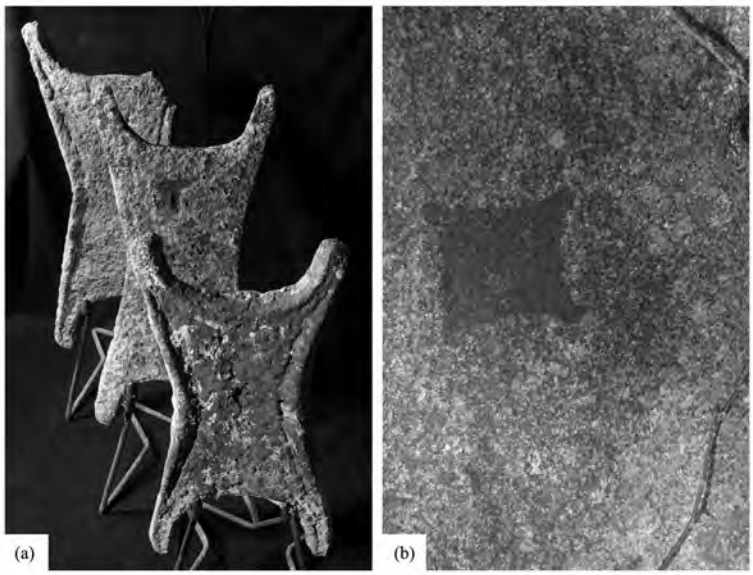


Fig. 2 *A: Oxhide ingots from cape Gelidonya (courtesy of the Institute of Nautical Archaeology). B: The oxhide ingot carved on the rock panel Kville 156:1, Torsbo, Bohuslän, Sweden (photo A. Mederos, courtesy of Prof. J. Ling, Gothenburg University).*

instead determined by the need to carry them easily.[1] Copper oxhide ingots weigh between *c.* 20 kg and *c.* 40 kg. A large number of them have a weight of around 29/30 kg which has led to the suggestion that one oxhide ingot might have been the equivalent of the Aegean talent weight unit.[2] Although debated, the association between any such ingots and a talent unit appears possible when considering that they may have been the object of a double counting.[3] Quick loading and unloading procedures could have been carried out by counting each piece as a talent, while their real weights would have been used for the final transaction/payment.

Early studies have also attempted to classify and provide chronological records with regards to shape variations within the class;[4] however, archaeological evidence shows that different types/shapes were used contemporarily. Only the first Buchholz's type (Bass type 1a and 1b), which features less protruding handles, appears to have an archaic character within the whole class.

1. E.g. Bass 1967, 69; Jones 2007, 85; Kassianidou 2012, 12.
2. E.g. Jones 2007, 84; Kassianidou 2012, 12; Muhly 2009, 18; Parise 1986, 308.
3. E.g. Parise 1968, 128, Zaccagnini 1986; Pulak 1988, 8.
4. Bass 1967; Buchholz 1959.

Oxhide ingots are indeed archaeologically documented in several forms. They are initially described as copper and tin ingots. Secondly they were also manufactured in miniature forms.[5] Thirdly they are known from representations on paintings and reliefs in Egypt, on bronze stands and cultic statuettes from Cyprus and rock art in Scandinavia.[6] Other oxhide representations, although some are highly questionable, have been recognized on cylinder seals, Linear B tablets and ceramics.[7] This manifold evidence communicates the complex narratives of this long lived class of material. In this work, attention will primarily be paid to the oxhide ingots in strict relation to the geographical and chronological information they provide as an understanding of the whole phenomenon.[8]

Distribution and chronology of the finds

Useful and detailed reviews/catalogues of the known finds have been published in earlier and more recent times with accurate lists of previous references;[9] these will generally not be repeated here. The main aim of this paper is to provide renewed insights into the whole phenomenon using a chronological perspective. In doing so items which can be accurately dated will primarily be taken into consideration. They offer a picture of the phenomenon's movement in space, which is worth extra attention. The large number of finds which cannot be precisely dated will also be considered as it provides an insight into the scale and significance of this class of material and the network patterns through which it circulated.

The proposed chronological journey is divided in three main periods (*c.* 1600-1400 BC; *c.* 1400-1200 BC; *c.* 1200-1000 BC). This simple model is based on several relevant observable changes regarding production, trade and the use of oxhide ingots. At the end of the 15th and the beginning of the 14th

5. E.g. Giumlia-Mair *et al.* 2011; Hadijsavvas 2011.
6. See respectively Papasavvas 2009 and Ling and Stos-Gale 2015.
7. E.g. Bass 1967; Knapp 1986; Manunza and Defrassu 2009; Papasavvas 2009.
8. Both full size and miniature ingots will be taken into consideration. It is worth highlighting, however, that a considerable number of oxhide ingots have been found in a fragmentary state. There is no possibility in this article to propose a thorough study of such evidence. Nonetheless it seems that while fragments of various shape and size can be connected to metalworking activities, quarters or halves of oxhide ingots are generally related to cultic contexts (cf. Caloi 2006).
9. Bass 1967; Bucholz 1959, 1988; Doncheva 2012; Gale 1991; Jones 2007; Kassianidou 2009; Kassianidou and Papasavvas, eds., 2012; Liard 2010; Lo Schiavo *et. al.*, eds., 2005; Lo Schiavo *et al.*, eds., 2009.



Fig. 3: *Distribution map of the oxhide ingots dated to the 16th and 15th century BC.*

century BC, as discussed below, the sources of copper, which were previously from multiple locations, shrank to being almost exclusively from the Cypriot lead isotopic field, in particular to the ore of Apliki in the Solea mining district.[10] Subsequently, at the passage between the end of the 13th and the beginning of the 12th century BC, datable evidence from Cyprus becomes less consistent while the oxhide ingot distribution appears slightly more significant in the Central Western Mediterranean. It therefore appears, particularly according to the scope of this paper, appropriate to propose such a temporal division for a fruitful discussion.

c. 1600-1400 BC

The earliest oxhide ingots are mainly found in the eastern part of the Mediterranean region including the island of Crete (Fig. 3). Evidence from this early stage already shows the multifaceted presence of such ingots both

10. E.g. Kassianidou 2013.

in their full form as well as miniaturized. Their representations in Egyptian tomb paintings from the 15th century onwards,[11] along with recently discovered evidence from Scandinavia, suggests that oxhide ingots were already part of a wide metal supply distribution network.

Aegean and Crete

The oldest full size copper oxhide ingots which have been securely dated by their archaeological contexts are found on the island of Crete; an island which lacks its own copper ores.[12] The finds from the sites of Chania, Gournia, Haghia Triada, Mochlos, Tylissos and Zakros can be dated to the Late Minoan (LM) IB (*c.* 1500-1450 BC), if not even earlier to the end of the LM IA.[13] They come from a complex set of contexts of both utilitarian and non-utilitarian nature.[14]

The oldest Cretan ingots are probably the most interesting as far as their provenance is concerned. Several of the early ingots (from Chania, Gournia Mochlos and Zakros) appear to have been produced with copper from Cypriot ores including Apliki.[15] For the significant remaining number of ingots it has not been possible to identify the source of their copper, yet they seemingly must come from at least two different non Cypriot copper ores.[16] Still unknown sources, somewhere beyond Mesopotamia, have recently been suggested,

11. It ought to be mentioned that it has been attempted (Nibbi 1987) to emphasize a series of representations of oxhide ingots on Egyptian Middle Kingdom sarcophagi (dated between approximately 2000 and 1600 BC). These images appear next to the term NMS which connects them to practices of wrapping. Largely due to chronological discrepancies these representations are generally not considered as images of oxhide ingots. Their recurrent association with specific elongated objects, arrows and bows (see Nibbi 1987) also suggests that they are not oxhide ingots. Nevertheless the similarity of the shape is striking. Given that there are currently no clues regarding the origin of the oxhide ingots, these representations together with Nibbi's (1987, 85-86) suggestion that oxhide-shaped ingots were in use during the Middle Kingdom for the transportation of salt, might actually warrant further investigation.
12. E.g. Liard 2010, 49; Stos 2011.
13. E.g. Liard 2010; Soles 2004.
14. The terms utilitarian and non-utilitarian contexts are used several times in this paper. With such definitions it is intended to roughly distinguish between contexts connected to metallurgical activity/workshops and thus containing material that was most likely waiting to be used (utilitarian) and contexts where material was probably deposited for ritual purposes (non-utilitarian) and not to be melted or further used later on. See also Liard 2010, 61, pl. 2; Lo Schiavo *et al.* 2013; Soles 2004.
15. Gale 2011; Liard 2010; Stos 2009, 173.
16. Liard 2010; Stos 2009; Stos-Gale 2011.

possibly in the area controlled by the powerful Mitanni Kingdom between the 15th and the 13th century BC. They surely suggest, however, that the production of oxhide ingots involved articulated systems of international copper supply, at least during the 15th century BC.[17]

Early oxhide ingots have been found in the Aegean, in particular at Ayia Irini on the island of Keos (from a context – House A - where metallurgical activity was taking place), and outside the coast of Kyme on Euboea.[18] They have been dated to the Late Helladic (LH) I and II (*c.* 1500-1400 BC); however Kyme's pieces were not from a completely reliable context as far as chronology is concerned.[19] Opposed to the Cretan oxhide ingots they appear to have been produced with metal from the Cypriot source of Apliki.[20]

At least one of the small ingot fragments found in a hoard in the West House at Kastri on Kythera, has tentatively been proposed as a possible part of an oxhide ingot.[21] The find dates to around the transition between the LMIA and LMIB period.

Egypt

A large amount of evidence comes from Egypt. The earliest representations of oxhide ingots in Egypt are generally in the form of paintings which have been found on the walls of several Theban tombs as well as in reliefs carved onto Karnak temples. The chronology of the former corresponds relatively well to the reign of Hatshepsut and Thutmose III (*c.* 1479-1400 BC), while the Karnak reliefs are dated to the reign of Amenhotep II and Thutmose IV (*c.* 1400-1390 BC).[22] Such representations are clear evidence of the ubiquity of using oxhide ingots in Egypt. They also speak in favour of the character of 'gifts' to the Pharaohs from foreign kingdoms. They appear as valuable goods to the Egyptians, suggesting that the Egyptians were most likely not casting the ingots themselves.[23] In the case of the Theban tomb of Rekhmire, dated to the time of

17. Stos-Gale 2011.
18. Cummer and Schofield 1984; Mangou and Ioannou 2000; Jones 2007, 419.
19. Stos-Gale *et al.* 1997, 112.
20. Gale 2011; Stos Gale *et al.* 1997.
21. Broodbank *et al.* 2007.
22. The chronology given in parenthesis in the text is taken from Hornung *et al.* 2006, 490-495. Such information is partly different from that given by Bass (1967, 62). He placed the reign of Hatshepsut and/or Thutmose III between 1490 and 1436 BC. Bass (1967, 65) also places Amenotep's reign between 1436 and 1411 followed by Thutmose IV between 1411 and 1397.
23. Stos 2011.

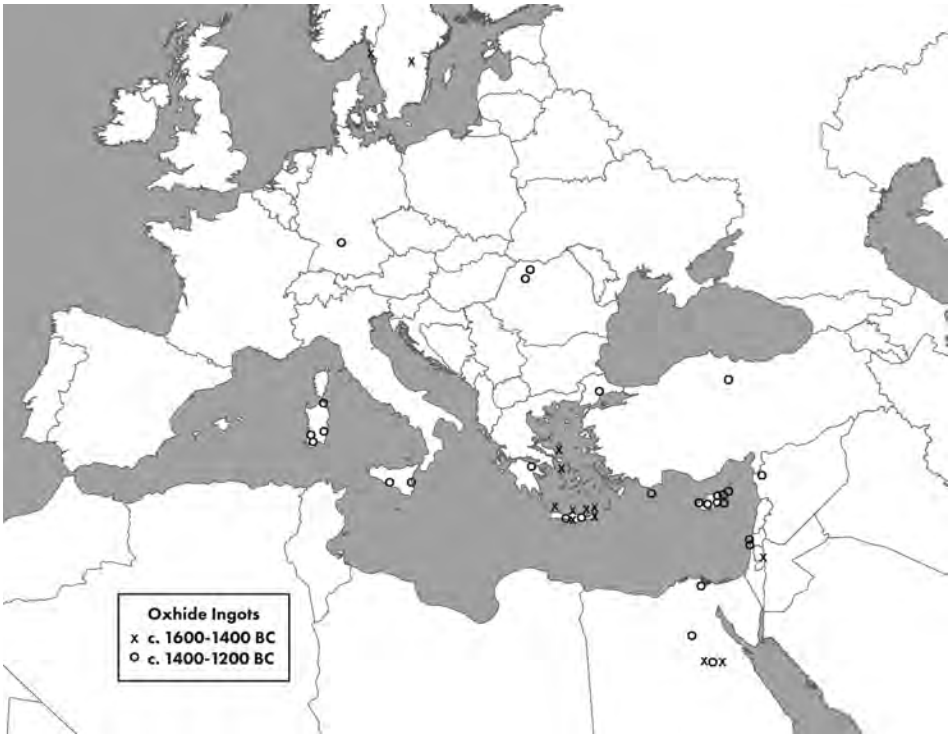


Fig. 4: *Distribution map of the oxhide ingots dated to the 14th and 13th century BC.*

Thutmose III – Amenhotep II, Shelley Wachsmann observed that the oxhide ingots clearly seemed to have been brought by the Aegeans.[24] In the tomb of Amenemopet, which dates to the reign of Thutmose IV, the bearers appear to be hybrids, in the sense that they are depicted with features which partly belong to the iconography of the Aegean people and partly to that of the Syrians. Oxhide ingot bearers are identified as Syrians in all the other Theban tombs.[25]

Levant

The oldest oxhide ingot currently known is half of a miniature sized example excavated at the beginning of the 20th century from the West Bank site of Tell

24. Wachsmann 1987, 50. It might be worth to recall here that one interesting detail from Rekhmire's tomb which matches the archaeological record is that the Aegean bearers carry several luxurious goods including an elephant tusk. Oxhide ingots, precious goods and elephant tusks have actually been found in association in a deposit from Zakros on Crete (Platon 1985; Liard 2010), dated to the final LM IA-LM IB.

25. Wachsmann 1987: 50.

Beit Mirsim. From the excavation report it appears to have been recovered from a workshop area of the so called stratum D which is dated to the 16th century BC.[26] If the reliability of the stratigraphy could be proven this miniature oxhide ingot would not only confirm the early emergence of this class of material, but also, due to its miniature shape and treatment (only half was found so it was probably cut into two parts), it infers that they held multiple meanings even at an early stage of their use and production.[27]

Northern Europe

Very recent and intriguing discoveries on rock art panels from Western Sweden imply an even larger vision of metal trade and networking patterns.[28] In particular the representation of a Buchholz type 1 oxhide ingot on the rock carving Kville 156:1, Torsbo in Northern Bohuslän (Fig. 2b), datable by association with the nearby carved boats to the 16th century BC shed light on the possible width of networking patterns which already existed during the 16th century BC.[29] Another conceivable representation appears 'on board' a ship (Fig. 4) carved on a panel from Östra Eneby 1:1.[30] The ship, which is dated between 1500 and 1300 BC[31], seems to have a stern-mounted steering oar, which is rather unknown in Swedish rock art,[32] while, interestingly, it is reminiscent of Mediterranean boat

26. Albright 1938, 54, pl. 41:13 and 58-60. However it has to be kept in mind that Albright's methods and influence have been questioned (e.g. Dessel and Joffe 2000).
27. The debate about the use and meaning of the miniature oxhide ingots is open. A recent contribution (see e.g. Giumlia-Mair *et al.* 2011 with previous bibliography) showed among other things that there is no need to cut them in order to melt them. Therefore it is suggested that there was some sort of ritual act behind such a practice. It is also suggested that, at least in terms of the finds from Cyprus, they were not used as weights.
28. The urge for collaboration between European and Mediterranean studies for better understanding and contextualisation of several phenomena has been rising in recent years (e.g. Alberti and Sabatini 2012; Maran and Stokhammer, eds., 2012; Wilkinson *et al.*, eds., 2011). An enlightening example is the conference 'Italy, Mediterranean and Europe in the Bronze Age' which took place in Göteborg, April 2013, where scholars of both the Mediterranean and European Bronze Age were invited. It is thanks to this mixed scholarship that, during the conference excursion, the importance of the Kville oxhide ingot (Fig. 2b) became evident.
29. Ling and Stos-Gale 2015.
30. Ling and Stos-Gale 2015.
31. Given its chronology between 1500 and1300 BC, the panel could also be the evidence of contacts taking place not at this early stage, but during next period (1400-1200 BC).
32. E.g. Kaul 1998; Ling 2008.

representations.[33] Additional potential representations of oxhide ingots, dated between 1600-1100, have also been detected on other rock art panels from different parts of Sweden.[34]

1600-1400 BC: Comments

A few brief comments should be made about this initial phase. In the first place it is interesting to stress the peculiarity of the Cretan oxhide ingots. They not only show the existence of a system of copper supply using manifold sources, but they also provide evidence of early use of Cypriot copper. Some of the Cretan oxhide ingots were made of metal matching the Cypriot ore of Apliki, whose copper had apparently been used for the manufacture of a large majority of copper oxhide ingots from the 14th century BC onwards.[35] This evidence, which seems difficult to question from the scientific point of view, has been challenged.[36] Kassianidou questions the feasibility of such evidence from a practical point of view, however, knowing very little about the political organisation of Bronze Age Cyprus it seems difficult to propose alternative interpretations. Muhly observed that although oxhide ingots generally seem to bear an Apliki signature and were a means of transportation of copper, which in turn must have been used to cast bronze objects, none of the analysed Mediterranean bronze objects seem to match Apliki signature. Where is the gap? Are bronze objects always the result of mixed copper sources? Indeed the fragmentary conditions of many of the oxhide ingots which were found in contexts where metallurgical activities were obviously taking place, along with the general presence of other material which was to be melted, seems to support the idea that casting was seldom carried out exclusively using ingots. In this respect it has been argued that given the necessity of mixing copper with tin in order to get bronze, the small amount of lead which is contained in pure copper oxhide ingots is changed during bronze production and thus the Cypriot origin of the copper basically becomes impossible to detect unless it is on Cyprus itself.[37] However recent analyses of Scandinavian metal artefacts have given the possibility to confirm the validity of lead isotope analysis (LIA) for the identification of the copper ores used in the manufacture of bronze objects.[38]

33. Wachsmann 1998 and 2013.
34. Ling and Stos-Gale 2015.
35. E.g. Gale 2011; Stos Gale *et al.* 1997, see also the considerations of Hauptmann 2009.
36. Kassianidou 2009, 63-4; Muhly 2009, 29-30.
37. Begemann *et al.* 2001.
38. See Ling *et al.* 2014, 117-118.

The second comment regards the Egyptian representations. Shelley Wachsmann illustrated how in most of the cases, oxhide ingots were brought to Egypt by the Syrians.[39] However he also admits that Egyptian paintings or reliefs are not photographs of real events. The rules that the artists were expected to follow and the circumstances in which they were working might have biased reality to an extent which is difficult to establish. Did the Theban tomb painters know about production and exchange practices which were primarily managed by Syrian merchants or were the Syrians just managing traffic with Egypt? Archaeological evidence from Crete, Keos and Kyme suggests that the Aegeans and Minoans were involved in practices of exchange and use of oxhide ingots. Could it be that the Egyptians, being more acquainted with Syrian merchants than Aegean people preferred to represent the former? In my opinion it is highly significant that Rekhmire's tomb - which shows the most detailed images of oxhide ingots and metalworking - is also the only one which undoubtedly shows the Aegeans as oxhide ingot bearers. Could it be that particular realism was applied to Rekhmire's tomb paintings? If so, why is that? Might these particularly accurate tomb paintings tell us more than the others do? Alternatively is Egyptian evidence just witnessing a various degree of care brought about by the complex management of copper trade during the 16th and the 15th century BC? According to a recent study,[40] our understanding of the representations of Aegean/Minoan people in Theban tombs has generally been biased by a sort of orientalist approach to the issue. It is instead proposed that Aegean/Syrian hybrids are not the outcome of ignorance or inaccuracy but are instead due to the way Egyptians perceived those people. Both texts and pictures suggest that they were considered to have belonged to a similar cultural sphere. In other words they were both regarded as people from Asia (or the 'north') and therefore liable to be hybridized with each other.

Egyptian paintings showing a silver or grey coloured oxhide ingot side by side with red ingots (copper ingots) also offer early evidence for the use of those ingots as a means of transportation of metal other than copper. George Bass proposed that the bluish oxhide ingots were made of lead or tin.[41] Later finds, particularly those from the Uluburun shipwreck, confirmed that tin oxhide ingots were actually manufactured and shipped together with the copper ones.[42] A practice that probably continued until at least the beginning of the 12th

39. Wachsmann 1987.
40. Matič 2012.
41. Bass 1967, 62-67.
42. E.g. Pulak 1997, 239.

century BC since, despite its poor conditions on the sea bed, the tin discovered on the Cape Gelidonya shipwreck was probably also cast into oxhide ingots.[43]

The most striking evidence as far as this early period is concerned is the recently discovered images from Scandinavian rock art. We probably should not assume that the presence corresponds with a full acquaintance to the underlying networks that this class of material represented in the Mediterranean, however, we cannot deny it either. From about 1600 BC in southern Scandinavian, we not only see an increased use and production of metal objects, but also of contact with the rest of the continent.[44] In addition, recent studies on the copper provenance of bronze objects found in Scandinavia suggest a complex picture for copper supply networks during the 2nd millennium BC;[45] this includes the presence of Cypriot copper in artefacts contemporary to the early oxhide ingot representations on rock panels. Such networks stretch all over the continent connecting the Mediterranean and the whole European continent in various ways.[46]

To conclude, early oxhide ingots demonstrate the manifold use and consumption of the class and its broad distribution even during its early stage. According to the archaeological evidence (regarding whether they are real ingots or representations of them), oxhide ingots have been found both in utilitarian (metal workshops) and non-utilitarian contexts (treasures/deposits). They were definitely used to carry copper as well as tin. Miniature oxhide ingots were also already in circulation.

c. 1400-1200 BC

Archaeological evidence dating from the beginning of the 14th to the end of the 13th century BC suggests a broadening of geographical and cultural horizons (Fig. 4) for oxhide ingots inasmuch as there was a sharp increase in the number of known pieces.[47] It currently shows a considerable reduction of sources used and the striking dominance of copper from the Cypriot mine of Apliki.[48]

43. Bass 1967, 82-3.
44. E.g. Vandkilde 1996, 2010; Kristiansen 1998.
45. Ling *et al.* 2014.
46. See also Rowland and Ling 2013.
47. As far as numbers are concerned this is due to the recovery of the Uluburun relict and its incredibly rich cargo containing, among other things, 354 copper oxhide ingots (e.g. Pulak 1997, 1998, 2008).
48. Gale 1999, 2006, 2011; Gale and Stos-Gale 2005, 2012.

Aegean and Crete

In the Aegean area, the ingots from Mycenae including those from the so called Poros Wall Hoard date to LH IIIB-C which may still be within the 13th century BC.[49]

Oxhide ingots from Kommos, Crete, were found in LMIIIB contexts.[50] Also at Haghia Triada, not far from the deposit of the *vano 7* from which the LMIB ingots where recovered, two fragmentary oxhide ingots were retrieved together with votive equipment from the Piazzale dei Sacelli dating to LMIIIC.[51] Opposed to the earlier ingots, whose source is still unknown, LIA on these LMIIIC fragments from Haghia Triada shows that they were made with copper from Apliki ore.

Anatolia and Uluburun

The Uluburn shipwreck excavated outside the southern coast of Turkey near the village of Kaş is currently dated to the very end of the 14th century BC. It is unrealistic to even attempt to provide a brief description of this impressive underwater find.[52] The ship contained a cargo of huge dimensions (probably of about 20 tons) and variety (including metal, ceramics, resins, glass, ivory, timber and a multitude of various objects and goods). The bulk of the cargo consisted of *c.* 10 tons of copper, transported in the form of 354 oxhide ingots of Cypriote copper and over 150 other smaller ingots (bun and oval). It also shipped *c.* 1 ton of tin, in the form of variously shaped ingots, including oxhide ingots.[53] The ship was most likely sailing westwards towards the Aegean or Crete,[54] maybe Kommos,[55] from somewhere along the Levantine coast or Cyprus.[56]

From the Anatolian mainland, one oxhide ingot fragment was found at Boğazköy, dated to the 14th-13th century BC.[57]

A quarter of an oxide ingot was found at İğdebağlari in the so called Sarköy/Tekirdağ hoard on the north-western shore of the Marmara Sea. The hoard is a very interesting assemblage of items from both the Balkans and the

49. See Gale 1991, 221; Mangou and Ioannou 2000.
50. Shaw 2006, 725-726.
51. Lo Schiavo *et al.* 2013, 51.
52. E.g. Pulak 1997, 1998, 2008.
53. E.g. Pulak 1997, 239.
54. E.g. Pulak 2005a and 2008.
55. E.g. Bachhuber 2006; Muhly 2009.
56. E.g. Muhly 2009; Pulak 1997, 1998 and 2008.
57. Jones 2007, 56 and 420 with previous bibliography.

Mediterranean area.[58] From a chronological point of view it can be dated to the end of the 14th and the beginning of the 13th century BC.[59]

Cyprus

Cyprus undoubtedly had a primary role as far as oxhide ingot production and, most likely, distribution are concerned. Not only do the results of the LIA give evidence of Cypriot provenance for most of the known ingots so far,[60] but also the manifold local iconographic reproductions (e.g. miniature oxhide ingots, ingot bearers on bronze stands, the so called Ingot God or the Bomfort statuette, both standing on a miniature ingot, as well as, several representations on seals[61]) confirm the important role that oxhide ingots must have had for the island.[62]

A recent catalogue of the oxhide ingot finds from Cyprus by Vasiliki Kassianidou clearly demonstrates how, despite the undoubtedly large production of oxhide ingots or at least of copper used to manufacture them, the ingot finds from Cyprus are scarce.[63] Only 9 sites produced evidence for oxhide ingots, most of which are in a fragmentary condition.[64] Several were found in the city of Enkomi. Due to the history of the excavations at the site they are unfortunately also the most difficult to date, however, the oldest find appears to be an oxhide ingot fragment, which is likely lost, found in *Quartier* 5W by the French mission of 1949, which was dated to the Late Cypriot (LC) II or 14th century BC.[65]

At least one other Cypriot oxhide ingot which ought to be dated to the 14th century is the example originating from the 'basin building' at the Maroni-Vournes site. Other fragments known from the same site might have a similar

58. Hansen 2005 with previous bibliography.
59. The hoard has been generally considered (e.g. Doncheva 2012, 686; Jones 2007, 421 and Pulak 2011, 299 with previous bibliography) to belong to the 12th-11th century BC. However a careful study by Svend Hansen (2005) seems to leave no doubt about the higher chronology of the context.
60. E.g. Gale 1999, 2006, 2011; Gale and Stos-Gale 2005, 2012.
61. A recent study (Papasavvas 2011) emerging from the Ingot God statuette's technological characteristics provides interesting insights in the complex relationship between copper production and the political organisation of Cyprus when sanctuaries and ritual symbols might have played relevant roles in the attempt to establish the authority of competing social groups dealing with metalworking after the 14th century BC.
62. E.g. Knapp 1986; Kassianidou 2009, 2012; Papasavvas 2009, 2011
63. Kassianidou 2009.
64. Kassianidou 2009, 41.
65. See Kassianidou 2009, 44 with previous bibliography.

early chronology. They appear to have been found in association with other material demonstrating the existence of metallurgical activities which predate the construction of the local 'Ashlar building' which is generally placed during the 13th century BC.[66] Most of the oxhide ingots from Maroni-Vournes contain copper which matches the Apliki ore, although at least one sample could actually be from the mines of Skouriotissa and Mavrovouni.[67]

Vasiliki Kassianidou argues convincingly to suggest that the finds from the so called 'foundry hoard', excavated by the British Museum at the beginning of the 19th century, should be dated to LCIIC and therefore to the 13th century BC.[68] The other finds from Enkomi are difficult to date; nevertheless they all illustrate intense metallurgical activities at the site.[69] On top of that, all of the analysed copper from Enkomi seems to match the Apliki ore,[70] which is one of the furthest away from it and thus creates an interesting question regarding the organisation of copper production on the island.[71]

Most of the recent discoveries from Maroni-Tsaroukkas, Aghios Dhimitrios-Kalavasos, Maa-Paleokastro and Pyla-Kokkinokrenos can be dated to the LCIIC.[72] These finds generally come from contexts where metallurgical activities of various intensity were taking place. The still unpublished fragment from Maroni-Tsaroukkas appears to have been associated with other industrial activities. The site is apparently the harbour of the Maroni-Vournes settlement which lay just a few hundred meters away.[73] At Aghios Dhimitrios-Kalavasos the three local fragments of oxhide ingots were recovered in room A50 of building IX.[74] The whole building has been interpreted as a possible copper smith residence.[75] Contrary to what one might expect, the LI of the fragments shows similarities to the Apliki ore and not with the nearby mines of Kalavasos.[76] The fragmentary ingots at Pyla-Kokkinnokrenos came from a founder's hoard which was probably deposited at the end of the short life of the site at the very

66. Kassianidou 2009, 46-48.
67. Gale 1999: 116; Stos-Gale *et al.* 1997, 110.
68. Kassianidou 2009, 43-44 with previous bibliography. The absolute chronology of the LCIIC has recently been radiocarbon-dated to *c.* 1340-1200 BC (see Manning *et al.* 2001).
69. E.g. Kassianidou 2009, 42-45 with previous bibliography.
70. Stos-Gale *et al.* 1997, 110.
71. Kassianidou 2009, 45.
72. E.g. Kassianidou 2009; Knapp 1990; Stos-Gale *et al.* 1997, 108.
73. Kassianidou 2009, 47-48 with previous bibliography.
74. South 1983, 104.
75. South *et al.* 1989, 320.
76. Kassianidou 2009, 49 with previous bibliography.

end of the 13th century BC.[77] Possibly contemporary to this example are the two fragments from the Mathiati hoard,[78] which appear difficult to date.[79] On the basis of the objects found in it, Hector W. Catling considered it to belong to the 12th century BC.[80] Such a chronology has been challenged and a possible dating to the 13th century BC is also proposed.[81] What is interesting, as far as Mathiati is concerned, is that it seems to be a founder hoard containing several fragments of full-size oxhide ingots as well as miniature ones. Despite being located close to a copper-rich district, Mathiati's finds match the Apliki copper ore which is some 60 km away from the site.[82]

Egypt

There are still representations of oxhide ingots in Theban tombs, generally carried by people which are generally interpreted as Syrian merchants during the 14th and the 13th century BC.[83] During the 14th century BC, other representations appear in the El Amarna tombs of Meryra, Meryra II and Huya. Again, the ingots were brought here by Syrians. The only known fragment from a full sized oxhide ingot found on Egyptian territory is not dated before the 13th century. Excavated at Qantir in the north-eastern part of Nile Delta, it also seems to have been produced with copper from Apliki on Cyprus.[84] At Qantir, which is identified with the city of Pi-Ramesse or Ramesse II's (*c.* 1279-1213 BC) capital, the excavations brought to light what could be considered a 13th century BC bronze factory with melting batteries and a series of large furnaces where enormous quantities of material must have been manufactured.[85] The presence of half an oxhide ingot confirms the utilitarian consumption of these ingots, as already shown in the Rekhmires tomb.[86] Given the size of the site, however, it also confirms that oxhide ingots do not represent the only source of copper within the extended Egyptian production.

77. Kassianidou 2009, 50 with previous bibliography.
78. Giumlia-Mair *et al.* 2011.
79. Kassianidou 2009, 52-54; Stos-Gale *et al.* 1997, 107-108.
80. Catling 1964, 283.
81. Knapp *et al.* 1988, 244-246.
82. See Kassianidou 2009, 54 with previous bibliography.
83. Bass 1967, 64, fig. 70-71.
84. Gale and Stos-Gale 1999, 272.
85. Push 1990; Rademakers *et al.* forthcoming.
86. E.g. Bass 1967, 63-65.

Germany

Significant non-Mediterranean evidence brings Continental Europe, with its social and economic changes relating to copper and metal circulation, into the picture. It also shed light on the complexity and far ranging copper supply networks in general, particularly those relating to oxhide ingots. Four fragments of oxhide ingots made from Cypriot copper were found in a hoard at Oberwilflingen in Baden-Wüttenberg, Germany. They are dated, at latest, to the end of the 14th/beginning of the 13th century BC.[87]

Levant

A complete oxhide mould carved in limestone was found at the Syrian site of Ras Ibn Hani,[88] deposited in a workshop of the North Palace of the centre and dated to the 13th century BC.[89] Despite the extraordinary nature of the discovery, Ras Ibn Hani's mould seems to provide more questions than answers. First of all there are no copper ores within easy range of the site. At the same time, the analysis of the copper drops found around the mould show that Cypriot copper matching the Apliki ore had been cast in it.[90] The evidence suggests that raw copper was shipped to Syria and that at least part of the oxhide ingot production might have taken place outside the island.[91] There is lively debate concerning how oxhide ingots were actually cast;[92] interestingly enough the Ras Ibn Hani's mould does not provide much help. First of all its material (limestone) does not seem to be the greatest choice for such production, and secondly because no furnace installations were found in its vicinity.[93] Was the mould really there to be used?

The recently re-published finds from Hishuley Carmel, off the coast of Israel in the region of Haifa are most likely dated to the 13th century BC.[94]

87. Primas 1997; Primas and Pernicka 1998.
88. E.g. Gale 1991, 203; Lagarce *et al.* 1983, 276-290.
89. E.g. Knapp 1990, 55-63.
90. Gale 2006, 5.
91. E.g. Artzy 2006, 20.
92. The list is very long. A more or less accurate discussion about the issue can be found among others in: Ben-Yosef 2012; Budd *et al.* 1995a, 1995b; Gale 2006; Hauptmann *et al.* 2002; Larson 2009; Merkel 1986; Jones 2007; Tylecote *et al.* 1984; Tylekote and Merkel 1985. For discussion about casting and LIA see: Begemann *et al.* 2001; Gale1991; Gale and Stos Gale 1986, 1988, 1994 and 1995; Hauptmann 2009; Stos Gale 1988; Stos Gale and Gale 1992; Stos Gale and Macdonald 1991; Ling *et al.* 2014, 117-118.
93. Lagarce *et al.* 1983, 276-290; Larson 2009, 12.
94. Galili *et al*. 2012.

They belong to a shipwreck which was preliminarily investigated in 1980.[95] According to the authors, the wreck was probably already plundered in ancient times; nevertheless it revealed a cargo containing 14 variously shaped tin ingots and two copper oxhide ingots. The two full copper oxhide ingots were manufactured with copper matching that from Apliki on Cyprus, while the tin ingots excavated at the site seem to belong to different sources.[96] The ship has been estimated to have been similar in size to that of the Uluburun, but it is difficult to assess its character due to the lack of the majority of its content.

There is another wreck close by which also contained oxhide ingots; it was discovered at Kfar Samir and may date to the 14th-13th century BC.[97]

Sardinia

Recent discoveries and a review of the Sardinian material provide evidence for the appearance of oxhide ingots on the island much earlier than previously considered.[98]

The earliest known attestation of an oxhide ingot from the island is actually a clay representation of it, which was recently discovered on a fragmentary cylindrical vase from the nuraghe Coi Casu – S. Anna Arresi (CA).[99] The piece is dated to a mature phase of the local Middle Bronze Age which in absolute chronological terms relates at latest to the 14th century BC.[100] The oxhide ingot fragments from Albucciu's nuraghe, Arzachena (SS) are now dated to the Italian Recent Bronze Age (*c.* 2nd half of the 14th-13th century BC) largely corresponding to the LH IIIA-IIIB.[101]

Several oxhide ingot fragments dated to the Recent Bronze Age (13th century BC) have recently been reported as having originating from the Funtana Coberta-Ballao hoard. The hoard was contained within a Nuragic jar of the type found in Kommos (locally dated to the LMIIIC) and deposited in a room next to the external wall of a Nuragic well temple.[102] The oxhide ingot fragment from under the floor of the Serrucci-Gonnesa (CA) Nuragic tower A is dated to a period towards the end of the local Recent Bronze Age/beginning of the Final Bronze Age and is therefore still within the 13th century BC.[103]

95. Galili *et al.* 1986.
96. Galili *et al.* 2012, 13.
97. Galili *et al.* 2012, 1 with previous bibliography.
98. Lo Schiavo *et al.*, eds., 2009.
99. Manunza and Defrassu 2009.
100. Depalmas 2009.
101. E.g. Ialongo 2010, 318-320; Lo Schiavo 2009a, 229-230 with previous bibliography.
102. Manunza 2008.
103. Santoni *et al.* 2012.

Sicily

Two finds from Sicily, from Cannatello and Thapsos, could be dated to sometime between the end of the 15th and the 13th century BC (LH IIIA-B).[104] Both finds are just fragments and there is no documentation about their specific context.

There is manifold evidence at Cannatello which shows a connection with the Aegean. Interestingly enough there is also evidence of contact with Sardinia. Relations with the Aegean are also clear at Thapsos, although the unfortunately scarcely published material from the site does not yet suggest the otherwise likely connections with Sardinia. Both have a strategic position as far as trade and maritime networks are concerned. At this point it is worth repeating that the western sword found on the Uluburun shipwreck which was identified as a Thapsos-Pertosa sword seems to have belonged to the Thapsos variety of the type and therefore to a fighting tradition connected to Sicily since the local Middle Bronze Age.[105] Trace elements from several of the oxhide ingots from Sicily are available, but no LIA has been carried out on any of the samples.[106]

1400-1200 BC: Comments

This is the time when Cypriot copper, in particular that from the mine of Apliki, appears to become the main source of production for oxhide ingots.[107] It has been underlined how the presence of Cypriot material in the Aegean, not just the copper, becomes so consistent that by the mid-13th century the island actually managed to 'dominate' the market and exchange patterns.[108] In this sense, this goes some way to explaining the presence of oxhide ingots on Cypriot cylinder seals, a class closely related to trade, dated to the end of the 14th century and the beginning of the 13th century BC.[109] The ingots on these seals are not central representations, but parts of them,[110] and are generally associated with other elements (predominantly human figures, trees and *buchrania*, but also various animals), which recur in other contexts or evidence in association with oxhide ingots (as for example the tree on the famous London bronze stand or the numerous *buchrania* found at Enkomi together with the Ingot and the Horned god[111]). The political organisation

104. Lo Schiavo *et al.* 2009 with previous bibliography.
105. Bettelli 2006; Vagnetti and Lo Schiavo 1989, 222-224.
106. Lo Schiavo *et al.* 2009.
107. Gale and Stos-Gale 2012.
108. Muhly 2009, 33; Sherratt 2000, 89.
109. E.g. Graziadio 2003; Knapp 1986; Papasavvas 2009, 90-93.
110. Papasavvas 2009, 129.
111. Papasavvas 2009, 118; Webb 2001.

of Cyprus during the Late Bronze Age is a matter for debate and it does not help in the search for an explanation of the striking utilisation of Apliki copper all over the island when other ores much closer to several of the named sites could have been used instead.[112] As discussed later, possible branding necessities or political factors must have played a relevant role.

Oxhide ingots and related finds from the 14th and the 13th century BC have been found in different contexts showing a utilitarian as much as a non-utilitarian character of these objects. Many (particularly in what is today known as Greece, Germany, Sicily and Sardinia) have been found in hoards whose function is difficult to determine.[113] Oxhide ingots were definitely used as frequently as they had been during the previous two centuries in large scale sea-based copper trade, clearly shown by the Uluburun cargo, the finds along the Anatolian and Israeli coast and/or the geographical position, particularly of the Sicilian sites. Considering the size of the Uluburun cargo, it is broadly accepted that to a certain extent such trade must have been managed by large political entities according to a fashion that very much seems to correspond to documented exchanges by the Amarna tablets;[114] however other possibilities should not be ruled out and would actually be of greater help in order to understand the presence of oxhide ingots outside palace structures.[115]

As in the previous period the oxhide ingot phenomenon does not appear to be an exclusively Mediterranean question. The fragments from Germany also show how circulation of oxhide ingots had overcome Mediterranean frontiers[116] during the 14th century BC, maybe seeking a continuous expansion?

Finally, the presence of Sardinia in the picture of oxhide ingot trade had been changing considerably throughout the last decades, as demonstrated in recent research.[117] It now seems clear that oxhide ingots were already known on the island during the 14th century BC.

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112. E.g. Kassianidou 2005, 2009, 2012; Knapp 2013; Lo Schiavo 2012; Papasavvas 2012.

113. Lo Schiavo (2012, 146) shows the numerous oxhide ingot fragments from Sardinia are generally retrieved in non-utilitarian contexts, unlike those found on Cyprus. In other words those fragments were hoarded in contexts where no metallurgical activity was found. Lo Schiavo (ibid.) suggests that what we find are just a few spare (for ritual purpose?) fragments out of a very large number of copper ingots which were all used.

114. Pulak 1998.

115. E.g. Monroe 2011.

116. As mentioned above, some of the Swedish rock art images depicting possible oxhide ingots could be dated between 1500 and 1300 BC (Ling & Stos-Gale 2015: 201-203); hence they could fall within this period rather than the earlier one.

117. Lo Schiavo 2009a, 2012.

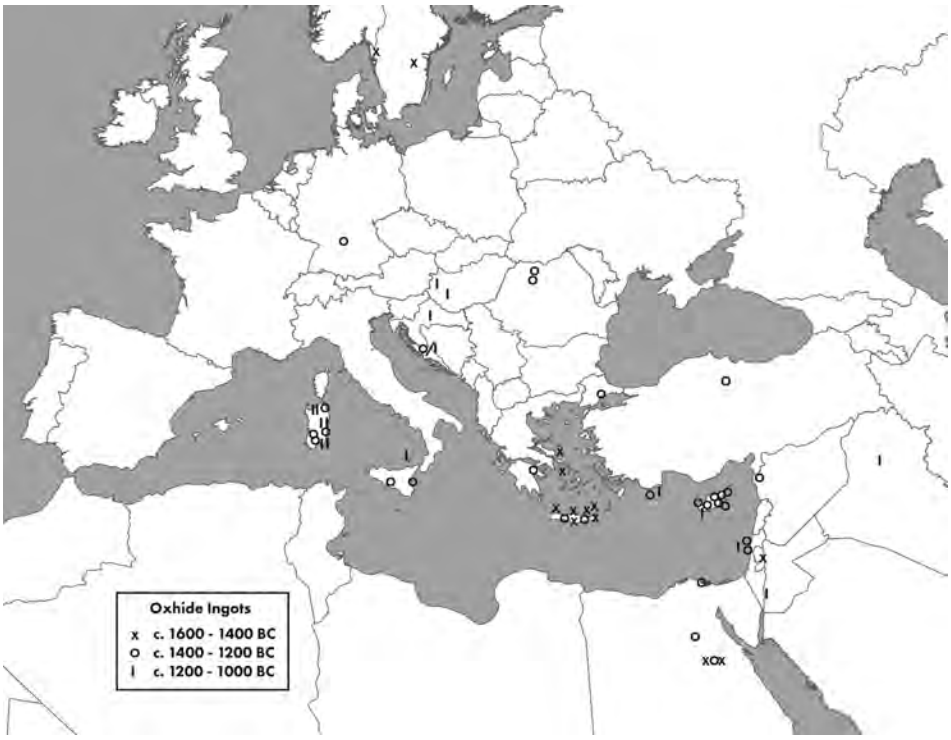


Fig. 5: *Distribution map of the oxhide ingots dated to the 12th and 11th century BC.*

c. 1200-1000BC

At the beginning of the 12th century BC oxhide ingots still had a 'solid' presence (Fig. 5). Unlike the previous phases, their distribution appears very significant in the central western part of the Mediterranean during this last period, particularly in Sardinia. Interesting finds from the Levant, however, suggest that the oxhide ingots were probably long-lived all over the Mediterranean and beyond.

Cape Gelidonya

Another fundamental underwater discovery is the Cape Gelidonya shipwreck which is dated to the end of the 13th century BC or the very beginning of the 12th century BC.[118] The Cape Gelidonya boat was found some 25 years earlier than the Uluburun along the same stretch of Turkish coast. The two finds are generally compared with each other due to their similarities, but also because

118. E.g. Bass 1967 and 2005; Muhly 2009.

of their differences. The cargo was not as impressive in terms of luxurious goods and quantities, but comparable in terms of variety to that of the Uluburun wreck.[119] The Cape Gelidonya ship was also transporting a considerable amount of metal including copper and tin ingots (at least 34 full copper oxhide ingots were recovered during excavation, while the softened nature of the tin on the seabed made it very difficult to recognize their ingot shape). Unlike the Uluburun, the Cape Gelidonya contained a significant amount of scrap material (e.g. broken bronze objects/tools, slags and so on) which would certainly have been reused and re-melted. According to George Bass, the Cape Gelidonya ship was sailing westwards, probably from Cyprus,[120] and was most likely not on the same sort of mission as the Uluburun, but instead following a circular trading route and stopping on its way to buy and sell goods. In other words it was probably a private enterprise apparently focused on the trade and exchange of metal.

Cyprus

It is possible to date the few fragments found at Maa-Paleokastro, whose LI also matches the Apliki copper ore field on Cyprus to the 1st half of the 12th century BC.[121] The fragmentary oxhide ingots from Alassa-Pano Mandilaris and Alassa-Palaiotaverna are also likely dated to the 12th century BC, although their chronology is not clear and they could instead belong to the LCIIC (13th century BC). They are two fragmentary miniature ingots, one of which comes from a likely cultic unit of domestic nature,[122] while the other is the corner of a full sized example.[123]

Egypt

Four artefacts from Egypt are dated to the very end of the 13th century and the very beginning of the 12th century BC (*c.* 1209-1185 BC).[124] They are miniature oxhide ingots or 'model ingots', as the author calls them. The ingots were probably found in four different foundation deposits from the funerary temples of Siptah and Tworse at Thebe by W.M. Flinders Petrie in 1896; their copper

119. Bass 1967 and 2005; Pulak 2005b; Wachsmann 1998, 303-313.
120. Bass 2013, 70; Muhly 2009.
121. Gale 1999, 116; Kassianidou 2009, 50-51 with previous bibliography.
122. Hadjisavvas 1986, 66.
123. Hadjisavvas 2011, 22-23.
124. O'Connor 1967.

has not yet been analysed. At least one of them shows two incised Egyptian cartouches on its surface providing relevant information about their chronology and maybe suggesting a local production.[125] The meaning of the miniature oxhide ingots is still debatable, however, their use in foundation deposits seems to confirm the multiplicity of meaning and uses of oxhide ingots in territories, like Egypt, where there is no evidence suggesting that production was actually taking place.[126]

Levant and Mesopotamia

The oxhide ingot found at Hahotrim, one of the several shipwrecks outside the coast of Haifa, Israel, could potentially be dated to the beginning of the 12th century BC.[127]

A partly preserved oxhide ingot clay mould dated to the 11th century BC was recently recorded at the Timna Valley site 30, Israel.[128] As suggested the item fuels a twofold hypothesis: it could be late evidence of the phenomenon in the Levant or of the production of analogously shaped ingots due the efficiency of the shape when used for the transportation of heavy ingots.[129] It definitely opens up for new research as far as casting moulds are concerned; as the author discusses, clay is very difficult to detect in the field but it is indeed a good material for such mould.

The oxhide ingot fragment from Dūr-Kurigalzu, Iraq is dated to the 12th century BC.[130]

Sardinia

Differing from Cyprus in that none of the pieces seem to have been manufactured with local copper, the evidence from Sardinia is manifold. Oxhide ingots, or fragments of them, are found on about 36 sites throughout the island; unfortunately, not many can be dated.

The oxhide ingot fragments from the hoard found in the Baccus Simeone area, Villanovaforru (Ca), were in a jar with an x-shaped handle which is

125. O'Connor 1967, fig. 162.
126. E.g. Giumlia-Mair *et al.* 2011 with previous bibliography.
127. Galili *et al.* 2012,1-2; Jones 2007, 429; Wachsmann and Raveh 1984.
128. Ben-Yosef 2012.
129. Ben-Yosef 2012, 193.
130. Brinkman 1974, 401; Jones 2007, 72 and 425.

typical of the local Recent and Final Bronze Age 1-2 (1350-1050 BC).[131] The finds could therefore be earlier than the 12th century BC.

A recently excavated hoard with oxide ingot fragments from the Nuragic village of Serra Elveghes, Olbia, can most likely be dated to an early phase (the beginning of the 12th century BC) of the Italian Final Bronze Age (*c.* 1200-975/950 BC).[132]

The hoard from Pattada (SS) is dated to the Final Bronze Age 1-2 (*c.* 1200-1050 BC) and no later than the 11th century BC through parallels with LCII-III material from Cyprus.[133]

The finds from the two hoards found at Sa Carcaredda, Villagrande Strisàili (NU) seem to belong to the beginning of the Final Bronze Age (approximately 12th century BC).[134]

Based on the contextual information and the associated material, it seems possible to date the fragments of oxhide ingot from the nuraghe Nastasi, Tertenia (NU), to the LH IIIC, which largely corresponds to the Italian Final Bronze Age.[135]

While the oxhide ingot fragments from the two Ittireddu (SS) hoards cannot be precisely dated, they are estimated to have originated in the 12th-10th century BC. They were found in a Recent Bronze Age nuraghe. Despite the chronology of the monument itself, however, the excavations at the site have so far only provided material from the Final Bronze Age and the Early Iron Age.[136]

The hoard from the *capanna delle canalette* at S. Anastasia village, Sardara (CA) was contained in a typical Final Bronze Age/Early Iron Age vessel, covered by another.[137] The bowl which served as a lid is dated to the Final Bronze Age and suggests that the Sardara finds could be from the 12th or 11th century BC.[138]

The oxhide ingot fragments found at nuraghe Bau Nuraxi, Triei (NU), are difficult to date as only partial excavations were carried out at the site. The context possibly belonged to the end of the Final Bronze Age/beginning of the Iron Age and therefore potentially to the 11th-10th century BC.

131. Campus and Leonelli 1999.
132. Ialongo 2010, 318; Lo Schiavo 2009a, 236-238 with previous bibliography.
133. Lo Schiavo 2009a, 296-301.
134. Lo Schiavo 2009a, 336-337
135. Peroni 1996, 264.
136. Lo Schiavo 2009a, 287-295.
137. Lo Schiavo 2009a, 362-363.
138. Campus and Leonelli 1999.

Oxhide ingot fragments were recovered together with numerous other metal fragments in the temple structure of S'Arcu 'e is Forros, Villagrande Strisàili, (NU), which although partly investigated, has also been damaged by illicit and subsequently undocumented exploitation. The fragments cannot be precisely dated, but the site shows a great degree of continuity from the Middle to the Final Bronze Age (e.g. 14th-10th century BC) and its peak between the Recent Bronze Age and the Final Bronze Age (13th-10th century BC). It also provides striking evidence of contact with Cyprus.[139]

Sicily

The hoard from Lipari was most likely deposited at the end of the 12th century BC. The hoard contained a large number of oxhide ingot fragments together with objects which are dated to the Ausonio I period (13th and the 12th century BC). The hoard was found under the wall of an Ausonio II hut and most likely belonged to the end of the Ausonio I period.[140]

Lipari is the 3rd site from Sicily with oxhide ingots. It appears to be slightly more recent than the other two, Cannatello and Thapsos, and has a different (in the Tyrrhenian Sea), but equally strategic position in terms of maritime connections and trade. It also presents evidence of contacts with both the Aegean and Sardinia, as seen in Cannatello.

1200-1000BC: Comments

The lack of precise chronological information about a large number of finds makes generalisation difficult, however it can be argued that oxhide ingots were probably disentangled from the character of gifts in Amarna's sense by the beginning of the 12th century BC. Evidence such as that provided by the Cape Gelidonya ship shows that they were used in trade of what was likely a private character. A large part of the known fragments from this period come from hoards such as those from Sardinia and Sicily. This does not mean that private trade did not take place in earlier periods, rather that the available evidence suggests that some sort of shift away from royal expedition and gift exchanges must have taken place as far as the circulation of oxhide ingots was concerned.

The last known Egyptian representations of oxhide ingots also belong to this period. They are found among the votive offerings on the relief of Ramesse III

139. Lo Schiavo 2009a, 332-335; Vagnetti and Lo Schiavo 1989.

140. Bernabò Brea and Cavalier 1980; Lo Schiavo *et al.* 2009 with previous bibliography.

(*c.* 1187-1157 BC) at Medinet Habu, which is generally dated to the 1st half of the 12th century BC.[141]

The 12th century was a time of great changes in international relations and trade; networking most definitely underwent different types of adjustments.[142] The complex archaeological evidence from Sardinia and the Central Mediterranean suggests that oxhide ingots adjusted to changes and continued to be used during the 12th and the 11th century BC.

A consistent part of the Italian archaeological evidence for oxhide ingots from Sicily and Sardinia, following an exchange tradition well rooted in the previous centuries, seems to be datable to this later phase of the phenomenon.[143] It also appears clear that exchanges were east to west and vice versa, as proven by the presence of Nuragic pottery in Crete and Cyprus.[144] Interestingly enough, recent discoveries show that between approximately 1500 and 900BC Sardinian copper, among other, was probably used in the production of bronzes as far away as Scandinavia.[145] Thus the island must have been part of a vast network of copper supply which was not limited to the significant internal use,[146] nor to the Mediterranean, but able to fulfil the needs and demands coming from different directions including regions in the far north like Scandinavia.

Non datable and debated finds

There are a lamentably large amount of non-datable finds from key areas, including many which were not discussed above. The contextual information is completely lost for most of these finds and there is no hope of dating them in the future. Their geographical position (Fig. 6), however, provides important information about the distribution of oxhide ingots and in many cases shows trade patterns and ways of communication whose relevance are still not fully understood.

141. Bass 1967, 67.
142. E.g. Kassianidou 2003; Kassianidou and Knapp 2005; Sherratt 2000.
143. E.g. Campus *et al.* 2008; Lo Schiavo *et al.*,eds., 2005; Lo Schiavo *et al.*, eds., 2009.
144. E.g. Campus *et al.* 2008: 72; Lo Schiavo 2012; Watrous 1989.
145. Ling *et al.* 2014.
146. Lo Schiavo (2009b, 404) highlights how there must have been a very high internal demand for copper/bronze in Sardinia during the Bronze Age. She suggests that it was high enough to justify the use of local sources as well as foreign sources while involving the island in international copper trade.

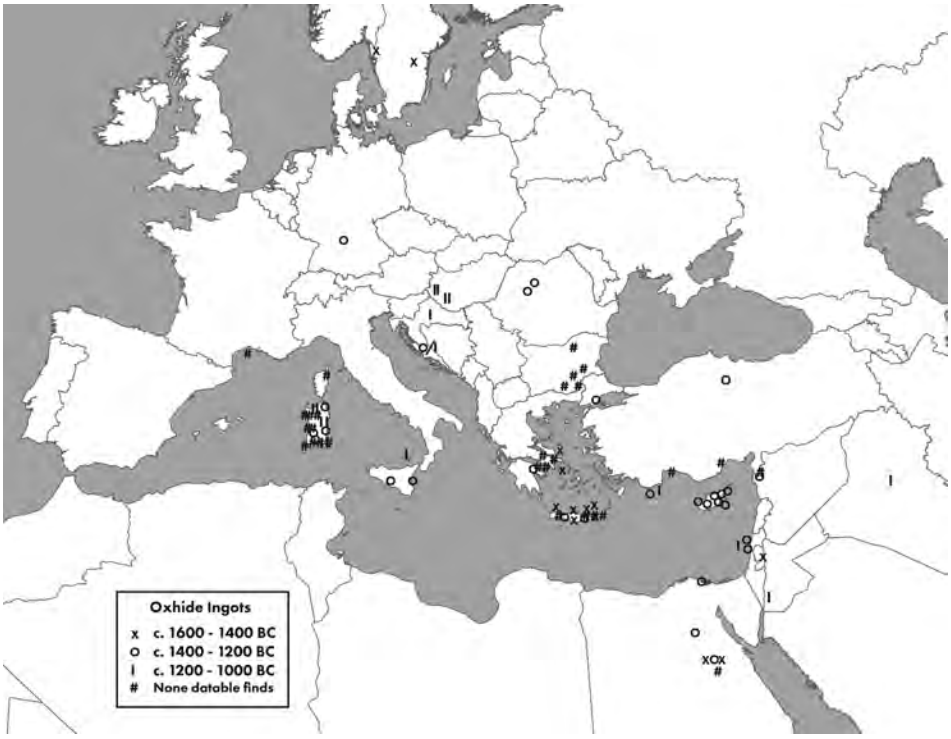


Fig. 6: *Distribution map of the oxhide ingots with chronological information about each find.*

Aegean and Crete

Fragmentary and full oxhide ingots which do not come from sufficiently reliable chronological contexts in the Aegean area include finds from Aegina, Athens, Thebes and Tiryns.[147] The finds on Crete from Poros, Sitia, Syme, and Palaikastro have also not been precisely dated.[148]

Anatolia, the Levant and Mesopotamia

Oxhide ingots from archaeologically not clearly datable contexts have been recovered in Syria, at Ras Shamra and in Anatolia along the coast in the area of Antalya.[149]

Due to the similarity of their shape, marks and isotopic composition to those found at Cape Gelidonya, it has been argued that the oxhide ingots found along

147. E.g. Bucholz 1959; Gale 1991; Mangou and Ioannou 2000; Jones 2007.

148. E.g. Liard 2010; Jones 2007, 417-418.

149. Bass 1967, 57-61; Gale 1991, 201; Jones 2007, 420.

Göksu Creek, in South-eastern Turkey, are probably dated to the end of the 13th-early 12th century BC.[150] Their inland position is very interesting as far as the movement of copper supply is concerned. It shows that Cypriot copper most likely also travelled terrestrially through Anatolia, potentially towards Mesopotamia, and through a region that is not far away (c. 170 km) from local large copper ores including the Ergani-Maden deposits.[151]

The scene uncovered at Nimrud in Mesopotamia is a dubious find. In the throne room of Shalmeneser III and on the so called Rassam or Black Obelisk, also from the Shalmaneser building, there are images which have been interpreted as possible ingots bearers.[152] The context dates to the mid-9th century BC. It is here considered remarkable that the bearers do not carry the ingots in the same way as the Egyptian or Cypriot representations. The shape of the ingots is also rather ambiguous and they might very well be sacks instead. Should they actually be oxhide ingot representations, then the chronology of the finds would suggest a relatively isolated persistence of the shape eight centuries after the first oxhide ingots appeared.

Bulgaria

Regrettably, none of the finds from Bulgaria can be precisely dated. Nevertheless, the geographical position of their discovery provides some important insights in the ongoing debate regarding contact between the Aegean and the Black Sea.[153] Full size oxhide ingots, or fragments of them, have been found at Kirilovo, Čerkovo and Černozem while a miniature example, maybe originally two, appears to have been recovered from Yabalkovo.[154] All of them are in the inland part of South-eastern Bulgaria along river valleys which must have played a key-role in local communication systems. It has been propose that it was more profitable to use land routes offered by the south-eastern part of the Balkan Peninsula rather than to sail through the Bosphorus and the Dardanelles straits to reach the Black Sea.[155] The Bulgarian oxhide ingots therefore make perfect sense when considering the possible direction of this land route. A couple of oxhide ingots have recently been reported from Kamenovo, which is also an inland site, this time from the north-eastern part of Bulgaria and not far from the Danube basin.[156]

150. Pulak 2011, 299.
151. Pulak 2011, 302.
152. Jones 2007, 77, fig. 8; Mallowan 1966, fig. 371a; Reade 1980, pl. III.
153. Doncheva 2012 with previous bibliography.
154. Doncheva 2012, 692-5; Leshtakov 2007, 451.
155. Kolb 2004, 592-593.
156. Doncheva 2012, 694-695.

As far as provenance is concerned, the find from Čerkovo and Černozem were analysed and their copper lead isotope falls into the Cypriot field.[157]

Besides these inland finds there is one ingot which was reported as an underwater find from Cape Kaliakra, near Sozopol, which has a peculiar oxhide-like shape. Due to its weight and content the piece has been recently interpreted as an ingot datable to the 1300-1450AD.[158]

Croatia

A miniature oxhide ingot, which was probably from a hoard, seems to have come from somewhere close to Makarska in Croatia. Its provenance, although likely, has been a matter of debate over the years.[159] If the composition of the hoard, currently found at the Ashmolean Museum in Oxford, could be confirmed it would most likely be dated to the 13th-12th century BC.[160]

A second miniature ingot comes from a hoard discovered at Kloštar Ivanić, in north eastern Croatia, which is dated to Hallstatt A2 period or 12th-11th century BC.[161]

Cyprus

On Cyprus there are finds from the bay of Soli and Skouriotissa which do not have reliable contextual information.[162]

This list also includes the full-sized oxhide ingots which are currently found in the Metropolitan, Nauphlion and Cyprus Museums, along with the miniature example in Cyprus' museum, whose possible place of origin has been tentatively reconstructed.[163]

Egypt

A miniature ingot in the Ashmolean museum in Oxford is said to have come from what is today known as El Manshah, close to Abydos. It has no archaeological context and therefore no reliable chronology. Its shape is also peculiar; one of

157. Respectively Stos-Gale *et al.* 1997, tab. 6 and Lichardus *et al.* 2002, 173-176.
158. E.g. Doncheva 2012, 683 with previous bibliography.
159. See Sherratt 2012; Vagnetti 1971.
160. Sherratt 2012.
161. Forenbaher 1995 with previous bibliography.
162. E.g. Kassianidou 2009, 55-56; Stos-Gale *et al.* 1997, 107-108.
163. Kassianidou 2009, 54-56.

the long sides is longer than the other and it is convex rather than concave. It has been suggested that it is a pedestal for a statuette.[164]

France

Regrettably, the oxhide ingots from France have no datable context. One ingot was found in deep water close to Sète in Southern France and another was found during agricultural works in North-eastern Corsica.[165] The ingot from Sète is very interesting due to its peculiar compact form. It has been interpreted as a possible Sardinian imitation of the well-known Cypriot oxhide ingots.[166] LIA for these French ingots are not yet available.

Hungary and Romania

A relatively large ingot fragment was found in the hoard of Pălatca, Transylvania, Romania, dated to the Bronze Age D/Hallstatt A or between the 13th and 11th century BC.[167] While it certainly appears to be an oxhide ingot fragment, it seems that the percentage of arsenic (3.39%) contained in the piece is very high compared to that of 'traditional' oxhide ingots;[168] further investigations are required in order to fully understand the meaning of this find.

There are also six oxhide-like miniature ingots from Cluj-Mănăstur, Transylvania, Romania, which may relate to the larger phenomenon.[169] They are dated to the Hallstatt A2 or the 12th-11th century BC.

Five miniature oxhide-like ingots have been found in metal hoards from Hungary.[170] They have been also considered as a manifestation of the connection

164. Nibbi 1987, 72-77.
165. D'Oriano 2013; Lo Schiavo 2009c, 2013.
166. Lo Schiavo 2009d, 2013.
167. Rotea *et al.* 2011. For a discussion about the local chronology see also Ciugudean 2010, fig. 4.
168. Giumlia-Mair 2011.
169. Wittenberg 2008, pl. 12; Schuster 2005.
170. At least one of them from the Birján hoard appears to be a 'genuine' piece (Moszolics 1985, pl. 62.6). It is dated to the local Kurd Horizon which corresponds approximately to the Hallstatt A1 or the 12th century BC (Ciugudean 2010, fig. 4). A second one comes from the hoard of Szentgáloskér (Moszolics 1985, pl. 114.1) which is also dated to the Kurd horizon (Ilon 1992, 253), while the pieces from the hoards of Beremend and Lovasberény (Moszolics 1985, pl. 245.10, 252.1) belong to the Gyermely horizon approximately corresponding to the Hallstatt A2 and thus to the 12th-11th century BC (Ciugudean 2010, fig. 4).

between the Mediterranean and the Hungarian plain.[171] Also from Hungary is a sandstone mould for a miniature oxhide-like ingot which was found in a pit in Gór-Kápolnadomb settlement.[172] The material associated to the mould dates the pit to the Hallstatt B2 period; a hypothesis which has been corroborated with the carbon dates from the same context suggesting a date between 1032 and 928 BC. The whole of this corpus has not yet been thoroughly studied or chemically analysed. Whether they are 'authentic' oxhide ingots, imitations of the Mediterranean ingots or they belong to a different system is a problematic and interesting issue worthy of further investigation.[173]

Sardinia

A total of 36 sites, which are spread all over the island, are currently known to have oxhide ingots.[174] Variously sized fragments of oxhide ingots have been recovered in 29 cases; a total of 7 complete ingots, respectively 5 and 2, were found at two sites (Serra Ilixi, Nuragus and Bisarcio, Ozieri). Aside from the sites discussed in the previous paragraphs, all the other ingots known so far do not have a reliable chronology.[175]

Final Comments

It has been argued that the archaeological evidence for oxhide ingots and Cypriot copper production seems to be relatively small in scale.[176] In fact just by looking at the aforementioned contexts which oxhide ingots were recovered from, it seems obvious how copper circulated in different forms.[177] It also came

171. Ilon 1992.

172. Ilon 1992, fig. 6.2.

173. It is worth noting that the Hungarian miniature ingots in question are considered to have probably been weights (Pare 1999, 493-498). Interestingly enough such a possibility appears in contrast with recent conclusions about the weights of the miniature oxhide ingots from Cyprus (Giumlia-Mair *et al.* 2009). See also Sabatini, in press.

174. Lo Schiavo 2009a with previous bibliography and 2009b, 394-395.

175. Updated lists of the known oxhide ingots from Sardinia are to be found in Lo Schiavo 2009a and Miletti, eds., 2013.

176. Kolb 2004: 592.

177. E.g. Kassianidou and Knapp 2005; Mangou and Ioannou 2000. *C.* 1 ton of copper on the Uluburun ship was transported in the form of so called plano-convex or bun ingots (Pulak 1998). Most of the contexts mentioned in this work contained other types of ingots alongside the oxhide ingots (e.g. Bass 1967; Doncheva 2012; Kassianidou 2009; Leshtakov 2007; Lo Schiavo 2009a and 2012; Primas and Pernicka 1998).

from different sources.[178] In other words we clearly have more than one system of production and distribution in operation during the LBA in the Mediterranean and beyond. Metallurgy and the circulation of copper must have been complex and large scale;[179] oxhide ingots only represented a peculiar, yet impressive expression of it.

This paper does not have the scope to discuss in any detail the historical and political changes which occurred in the Mediterranean and beyond during the LBA,[180] but it must be kept in mind that in several cases such changes were in remarkable proportions and must have had considerable effects on markets, exchange patterns and trade routes. The limited, but significant results of recent LIA from Scandinavian BA bronze items provide an unexpected yet relevant idea of the variation in the channelling of the copper supply throughout Bronze Age Europe.[181]

Oxhide ingots can be defined as the most remarkable class of ingot in terms of shape, weight, purity and the technological and material efforts they required to be produced. Their distribution and chronology show a complex circulation involving multiple lands, cultures and therefore also political and economic systems. Consequently we also have to imagine a number of different methods of contributing to their circulation patterns (see Tab. 1), not least through time.

From an economic and pragmatic point of view, either as integrated components of the so called gift exchange economy or as commodities or goods, oxhide ingots were undoubtedly suitable for the transportation of large quantities of copper. We ought to assume that their peculiar, yet difficult to obtain shape was probably familiar to a variety of receivers/markets. It most likely embodied a message either connected to their weight, their content and purity, maybe the provenance of their copper and/or the skilled labour necessary for their production, which was not only recognized over a wide landscape, but also over an extremely long period of time. As it has been proposed they seem very much to embody all the characteristics of a brand commodity.[182] The multifarious archaeological evidence does make the branding hypothesis intriguing.[183] Yet more, would the idea of considering oxhide ingots to be a

178. Bergemann *et al.* 2001; Donceva 2012; Gale 2006; Hauptmann *et al.* 2002; Lo Schiavo *et al.*, eds., 2009; Ling *et al.* 2014; Stos-Gale 2011.
179. Kassianidou and Knapp 2005; Ling *et al.* 2014; Lo Schiavo 2012; Pare, ed., 2000; Rowlands and Ling 2013; Sherratt 2000.
180. See Kassianidou and Knapp 2005 and Sherratt 2000, although both with focus on metal trade.
181. Ling *et al.* 2014.
182. Bevan 2010. Sabatini, in press.
183. Wengrow 2008.

brand commodity shed light on the reason why tin on board of the Uluburun ship was also transported in the form of oxhide ingots?[184] Silver coloured oxhide ingots represented in Egyptian tombs were most likely also tin ingots.[185] Was this done in order to make this indispensable component of bronze production as familiar as copper was to any market? Maybe tin sources will one day shed light on the origin of the oxhide ingot shape? The debate about which sources of tin were used and how they were exploited is ongoing.[186] We lack secure data, but as demonstrated in recent works, none of the possible candidates (Iberian peninsula, Brittany, Great Britain, Central European sources, sites further east than Mesopotamia) seem extraneous to the LBA Mediterranean world.[187]

The known finds leave no doubt about the production and consumption of oxhide ingots being connected to systems of international distribution, exchange and trade. Most of the analysed ingots which are datable to the 14th century BC and onwards seem to not only have been made of Cypriot copper, but out of just one particular ore from Apliki.[188] We know little about the political organisation of Cyprus during the 2nd millennium BC, nonetheless the manifold evidence from the island confirms the important local role of those ingots.[189] We are not yet able to localize the copper source used for some of the oldest known oxhide ingots from Crete, but it seems clear that after the 14th century, they become very much a sort of Cypriot branded good throughout nearly three centuries.[190] What came before them? Did Cyprus made its own or was it someone else's brand? If the recent interpretation of the French oxhide ingot from Sète could be confirmed to the end of the 12th or the beginning of the 11th century BC then the Nuragic people most likely attempted a new translation.[191] Although without apparent success, it seems that they tried to take over (for the second time in the history of oxhide ingots?) the oxhide ingot 'label' for a further (market?) expansion.

To conclude, oxhide ingots have primarily been a means of transporting copper throughout their long history; however, in doing so they must have embodied meanings. Their distribution, chronology, miniature manufacture, presence in ritual/funerary and cultic contexts or in association to metallurgical activities creates a multifarious picture.

184. Pulak 1997, 239.
185. Bass 1967, 63-67.
186. E.g. Giumlia-Mair and Lo Schiavo, eds., 2003.
187. Rowlands and Ling 2013.
188. E.g. Gale 2006, 2011; Gale and Stos-Gale 2012.
189. E.g. Kassianidou 2009; Papasavvas 2009.
190. E.g. Stos 2011.
191. Lo Schiavo 2009d, 2012, 2013.

When considering the increasingly complex spread of oxhide ingots, the chronology and distribution pattern of their representations should also be taken into account. Besides miniature ingots, which could also be considered as three-dimensional representations, there are oxhide ingot images in tomb paintings, temple reliefs, cylinder seals, Linear B tablets, pottery and rock panels.[192] No such evidence has been discussed in detail in this paper, but it is interesting to note that several of the sources appear to predate any local appearance of 'real' copper oxhide ingots. How should we interpret this data? The sources rather pragmatically suggest that the oxhide ingot distribution patterns must have been significantly larger than what the archaeological record currently tells us and that most of the copper which was transported has been used. The Uluburun shipwreck provides a fairly impressive idea of the very large amount of metal that must have been in circulation during the LBA. The complex and largely debated case of Sardinia, which seems to have produced copper at the same time as receiving a supply from Cyprus, speaks in favour of the intense movement of ingots, where the origin or purity of the copper had significant and specific values; these worth to be guaranteed through branding practices, and oxhide ingots embodying one such brand.[193]

One topic which has not been covered in this brief work is the existence of symbols both impressed during the cooling stage of the ingot, and/or incised at any time once the oxhide ingots were in circulation. Several signs have been considered as Cypro-Minoan marks, but this is highly debated.[194] Most of the incised symbols on the ingots from the Uluburun suggest, for example, that the people who made them were living and working in close contacts to the sea.[195] However it is likely that they provided clarification about the items themselves, possibly about their content, origin or maybe their destination.

All in all, the discussed evidence suggests that oxhide ingots could be considered as a symbol of networking and connectivity beyond cultural, political and economic differences. They seem to very much embody the characteristics of Bronze Age Europe and the Mediterranean as arenas where exchanges played a major role in the emergence, development and maintenance of the local/global systems.

192. Bass 1967; Ling and Stos-Gale 2015; Papasavvas 2009; Wachsmann 1987.
193. Bevan 2010; Wengrow 2008, 2010.
194. Amadasi Guzzo 2009; Buchholz 1988; Hirschfeld 1999; Jones 2007; Kaiser 2013; Pulak 1998; Sibella 1996.
195. Pulak 1998, 195.

When?	Where?	How?	What?	And?
1600-1400 BC	Aegean (Keos, Euboea, possibly Kythera); Crete (several sites); Egypt (Thebe, Karnak); Palestina (Tell Beit Mirsim); Sweden (Torsbo, Östra Eneby)	There are already both full and miniature sized oxhide ingots. In Egypt oxhide ingots are images on tomb paintings and temple reliefs. The oxhide ingots from Sweden are carved images on rock panels	Cyprus copper and other sources not all known	Oxhide ingots are found in both utilitarian and non-utilitarian contexts. Thus they ought to have already at this early stage multiple meanings/functions. Egyptian evidence suggests they are part of the so called “gift exchange economy” in the eastern Mediterranean world. The recent finds from Sweden support the hypothesis of copper supply networks stretching between northern Europe and the Mediterranean.
1400-1200 BC	Aegean(Mycenae); Crete (Kommos, Haghia Triada); Cyprus (several sites); Egypt (Thebe, El Amarna, Quantir); Germany (Oberwilflingen); Levant (Hishuley Carmel, Kfar Samir, Ras Ibn Hani); Sardinia (several sites); Sicily (Cannatello, Thapsos); Turkey (Boğazköy, Uluburun, Sarköy/Tekirdağ)	To this period belong most of the finds from Cyprus. They come from all over the island. The piece from Quantir is so far the only full sized copper oxhide ingot known from Egypt; local tomb paintings and relief representations continue.	Cyprus copper, mostly Apliki ore	By the end of the 14th century BC the distribution area gets wider. The evidence is manifold. We cannot exclude that the newly involved territories were not so in earlier times, however no finds can confirm that yet. Evidence from the Eastern Mediterranean seems to imply the existence of palace-like entrepreneurship. Evidence from Cyprus, Sardinia and north of the Alps provides an impressive picture of the possible networks beyond production, distribution and consumption of copper/ bronze in general and oxhide ingots in particular.

1200-1000 BC	Cape Gelidonya; Cyprus (Maa-Paleokastro, Alassa); Egypt (Thebe); Levant (Dūr-Kurigalzu; Hahotrim, Timna 30); Sardinia (several sites); Sicily (Lipari)	Tomb and temple representations from Egypt have come to end.	Cyprus copper, mostly Apliki copper ore	By the end of the 13th/beginning of the 12th century BC, Cape Gelidonya and the wrecks from the Israeli coast show the continuing combination of maritime copper trade and oxhide ingots. Evidences from Sardinia, becomes predominant.
No certain date and/or debated finds	Several site from : Aegean, Anatolia, Bulgaria, Crete, Croatia, Cyprus, France, Greece, Hungary, Levant, Romania, Sardinia	The non-datable oxhide ingots are miscellanea of finds (full size or miniature ingots) from both inland and underwater contexts. The 'debated' finds have in some cases precise dating.	Cyprus copper, mostly Apliki copper ore, when analyzed. None of the 'debated' finds has yet undergone complete archaeometallurgical analyses	These finds widen up the scope of the phenomenon. They suggest the existence of networks whose relevance is much to be understood, particularly as to metal circulation between the Mediterranean, the Balkans and the rest of Europe. The Sète ingot might be a Sardinian attempt to take over (?) the international the copper trade embodied by oxhide ingots.

Table 1: *Synoptic table of archaeological evidence for oxhide ingots discussed in this work (chronology, context, formal characteristics, content and additional information).*

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The Mycenaeans and Europe: Long-distance networks and cross-cultural communication

Paulina Suchowska-Ducke

In the 2nd millennium BC cultural, social and political entities of a new kind and scale came into existence and transformed Europe into a distinct cultural zone, where intense and dynamic interactions between local, regional and 'global' processes of change intersected with increased social connectivity and mobility. The presence of artefacts made of non-local raw materials in archaeological contexts indicates that mechanisms for the import of essential goods and other forms of cross-cultural exchange have existed throughout prehistory. Therefore the archaeological evidence provides an excellent proxy for studying questions related to socio-political organisation, cultural boundaries, communication networks and mobility of people, goods, technologies, and ideas. This contribution discusses relations between the Mycenaeans and the societies of temperate Europe in the mid 2nd millennium BC. Although long-distance interactions may have often been indirect, societies across Europe, from the Mediterranean all the way to Scandinavia, were incorporated into vast communication networks that linked them together.

An introduction to chronological and theoretical frameworks

Cross-cultural communication, trade and exchange in its various manifestations (local, interregional and long-distance) are fundamental and ubiquitous forms of social organisation and interaction. The main reason for this may be seen in the unequal geographic distribution of desirable raw materials like obsidian, flint or metal. Securing access to such goods by creating social networks via interpersonal relations and diplomatic alliances, which are in turn maintained through the exchange of gifts, has always been a fundamental motivation for forming social ties. Investigating how these relations and their material manifestations changed in time and space offers tremendous opportunities for the study of human interaction across cultural boundaries. Several scholars have previously investigated contacts between the Mycenaean world and temperate Europe.[1] However, new evidence

1. Harding 1984; Bouzek 1985; Lewartowski 1989.

has recently been unearthed. The following discussion will concentrate on direct archaeological evidence. Aspects touching the religious and ceremonial or symbolic spheres – which may contain as much ambiguity and interpretational doubt as potential information – are not explored in depth.

The chronological framework for the phenomenon under study encompasses the Mycenaean period, i.e. the 17th to 11th centuries BC (see Table 1). Cross-cultural contacts and long-distance communication between Greece and temperate Europe already existed in the early Mycenaean period, as is evidenced by the Baltic amber and the Carpathian and eastern European horse harnesses that appeared in the Shaft Graves of Mycenae.[2] There are also many examples of Mycenaean rapiers and swords that have been found in the Balkans and in the Carpathian Basin.[3] Most of them date to the Early Mycenaean period. Some Mycenaean influences might also be visible in several swords from northern and Central Europe, generally dating from the 14th to 11th century BC.[4] Nevertheless, communication between Mycenaean Greece and temperate Europe was particularly intense at the end of the 13th and throughout the 12th century BC, when numerous artefacts of so-called 'northern origin' appeared in the South. Among them were different types of weaponry, dress fasteners, jewellery and ornaments, as well as Handmade Burnished Ware.[5] At that time, significant political, social and economic transformations occurred on the European continent, generally attributed to large scale migrations and changes in warfare.[6]

The problem that immediately becomes apparent when trying to understand European and Mycenaean relations is the complexity that would result from trying to examine every archaeological source on its own. The main danger here lies in over-interpreting the meaning of individual items and neglecting the bigger picture. To overcome this issue, different scales of analysis need to be chosen and carefully linked with each other. For the purposes of this study, a suitable approach is to investigate the evidence on an interregional ('global') scale to reveal general patterns and processes, complemented by regional scale case studies to verify local effects (it is generally thought that communication networks exhibit interesting properties on many scales).[7]

2. Karo 1930, 1933; Harding and Hughes-Brock 1974; Harding 2005; Hughes-Brock 2005.
3. Alexandrescu 1966; Panayotov 1980; Bouzek 1985; Kilian-Dirlmeier 1993; Wardle 1993.
4. Randsborg 1967; Bouzek 1985, 120, 221; Thrane 1990.
5. Harding 1984; Bouzek 1985; Lewartowski 1989.
6. Drews 1993.
7. Barabasi 2003 or Christakis and Fowler 2009 for a general introduction to social network theory.

Table 1. *The chronology of the Bronze Age Aegean and Central Europe.*

Central Europe		**Greece**	
Period	**Date**	**Period**	**Date**
Br A1	2400/2300-2000	EH III	2400/2300-2100
		MH IA	2100-2000
Br A2	2000-1600	MH IB	2000-1900
		MH II	1900-1800
		MH III	1800-1700
		LH I	1700-1600
Br B	1600-1500	LH IIA	1600-1490
Br C1	1500-1400	LH IIB	1490-1430
		LH III A1	1430-1390
Br C2	1400-1300	LH III A2	1390-1300
Br D	1300-1200	LH III B	1300-1200
Ha A1	1200-1100	LH III C	1200-1100
Ha A2	1100-1000	Submycenaean	1100-1050/1020

This study assumes that cross-cultural communication between the Mycenaeans and the societies of temperate Europe occurred within different types of established networks. In some cases, contacts were indirect, as systems of connected 'networks of networks' allowed objects and ideas to travel via middlemen. In other cases, they were direct and occurred within smaller networks that provided particularly efficient links. Once established, these connections inevitably became catalysts of cultural exchange in many forms that eventually led to profound social change throughout the European continent.[8] In the Bronze Age, networks for the supply of raw materials, and later more refined commodities, created incentives for individuals to move across the mainland, taking on many different roles, such as those of travelling craftsmen and traders, warriors and mercenaries, emissaries and perhaps explorers. It is at this point that we can truly speak of 'travelling cultures'[9] and connected societies.

The idea that no society can exist in isolation and that even remote 'neighbours' depend on each other as part of a connected system is expressed by Wallerstein's classic World System Theory.[10] A recent review of both World System Theory and network analysis by Harding suggests that the two represent

8. Kristiansen and Larsson 2005; Vandkilde 2007.
9. Kristiansen and Larsson 2005; Vandkilde 2007.
10. Wallerstein 1974.

opposed perspectives on social processes.[11] However, the concepts of network analysis transcend scales and are fully compatible with the systemic approach of World Systems Theory, both in regards to their general focus on interactions and in specific notions such as 'cores' and 'peripheries'.[12] This is because even though the reconstruction of networks is usually performed in a bottom-up manner (by establishing links between individuals of interest) the tools of network analysis are capable of finding relationships on a higher (group) level. Indeed, one may state that Wallerstein's theory can give sociological meaning to the properties revealed by network analysis, that both models complement each other, and that they both support a top-down and bottom-up perspective. Hall, Kardulias and Chase-Dunn provide profound insight into these theoretical issues while also giving an overview of archaeological case studies that employ a systemic world view approach.[13]

The Mycenaeans and Europe: the evidence

The evidence for Mycenaean contacts with temperate Europe in the mid 2nd millennium BC is rich and diverse. Of the items that speak of cross-cultural communication, one may find amber, bone and antler horse harnesses, dress fasteners, personal ornaments and jewellery, weaponry and tools, as well as Handmade Burnished Ware made of local clay. Most of the artefacts, and the sites where they were found, are well covered in the available literature.[14] The published data clearly indicates that long-distance communication between the societies of Central Europe, northern Italy and the Aegean had already taken shape at the beginning of the Mycenaean Culture, dated to 1700 BC. Nonetheless, it was the transition from the 13th to the 12th century BC when these relations became particularly intense. According to Bouzek, at that time one might speak of a *koine* (common market) in material culture between the Aegean, the Balkans, northern Italy and Central Europe.[15] This discussion will focus on a selection of types of artefacts which are clearly recognisable as foreign in the places were they occurred: amber, horse harnesses, dress fasteners and weaponry.

11. Harding 2013, 14.
12. Kristiansen and Larsson 2005, 20-25.
13. Hall, Kardulias and Chase-Dunn 2010.
14. Harding 1984; Bouzek 1985; Lewartowski 1989; Sherratt 2000 with further references.
15. Bouzek 1985, 241.

One of the most recognisable items of so-called 'northern origin', found in the Aegean, is Baltic amber. The earliest known fragments appeared in mainland Greece in MM III B.[16] In the Aegean, amber is mostly known from wealthy graves, where it occurs with gold and electron. Most amber fragments date to MM III B/LH I-LH II and were found in the graves of Mycenae, Pylos, Peristeria, Kakovatos, Thebes and Orchomenos.[17] However, amber was also found in later periods – in LH III on the Peloponnese, in Thessaly, on Crete and Euboea and during the Submycenaean period in Elis and on Salamis. In total, nearly 4000 amber fragments have been found in the Aegean; in shaft grave no. IV of Mycenae alone, 1290 beads were recorded.[18] One needs to keep in mind that amber is an organic substance that disintegrates when exposed to oxygen, and that most of the rich Mycenaean burials have been plundered; thus the number of known objects certainly falls short of the original amount.

Another important class of artefacts are horse harnesses made of bone and antler. The specimens found in the Shaft Graves at Mycenae bear morphological similarities to cheek pieces from the Carpathian Basin and Eastern Europe.[19] In relation to horse harness, it is important to consider the so-called 'running spiral' and 'wave band' ornaments that were very popular in the Aegean and in Central Europe, mainly in the Carpathian Basin, as well as in Scandinavia.[20] Around the 17th-16th centuries BC, in the North and in the South, many items, including bone cheek pieces, discs, cylinders, bronze axes, swords, daggers, jewellery and pottery, were decorated with these motifs. Although in these regions the running spiral and wave band ornaments had already been applied since the Neolithic, some researchers claim that 'there are too many resemblances between the Carpathian Basin and the Aegean to consider them as merely accidental'.[21] Moreover, as David notes, 'ornamental and morphological characteristics of some Danubian objects and Mycenaean or Anatolian examples are so closely related that they would not be imaginable without the existence of direct contacts between these regions'.[22]

Dress fasteners (pins and fibulae) are a group of artefacts that testifies to a different aspect of relations between the Mycenaean Culture and the societies of temperate Europe. They appeared in the Aegean at the end of LH III B and

16. Dietz 1991, 263.
17. Harding and Hughes-Brock 1974; Hughes-Brock 2005.
18. Harding and Hughes-Brock 1974, 147.
19. Hüttel 1981; Penner 1998; Harding 2005.
20. Randsborg 1967; Thrane 1990; David 1997.
21. Bouzek 1985, 60.
22. David 2007, 414.



Fig. 1 *Distribution of pins and fibulae.*

throughout LH III C (Fig. 1). Because they are personal items, some authors associate their occurrence in Mycenaean Greece with the arrival of new groups of people, presumably members of the Protovillanova, Tumulus and Urnfield Culture groups.[23] Three main pin types have been recorded in the Aegean: (A) with elongated swelling and a series of ring-mouldings or with shallow incised rings and flatter swelling; (B) with a disc at the head and a globular swelling a little way down the shaft; and (C) with spatulate tip or roll-topped pin.[24] The majority of them was found in Attica, Argolid, Elis, on Crete and Euboea.[25] These long pins were very popular in Central Europe, Italy and in the Balkans during the 14th and 13th centuries BC, and also in the Near East and in Anatolia.

Unlike pins, fibulae were not known in the Aegean before the 13th century BC. Of this type of dress fasteners two main forms were found: (A) violin-bow and (B) arc fibulae.[26] Violin-bow fibulae appeared in LH III B, mostly in the Argolid and on Crete, as well as in Achaea, Attica, Beotia, Laconia and Corinthia.[27] Around LH III C they were gradually replaced by arc fibulae, most of which are known from the Kerameikos cemetery in Attica.[28]

Another significant group of objects to be considered here are weapons of both Mycenaean and European origin. For instance, at least 23 rapiers and 42 swords of Mycenaean type have been found in the Balkans and in the Carpathian

23. Bouzek 1985, 159, 167.
24. Kilian-Dirlmeier 1984.
25. Bouzek 1985.
26. Kilian 1975, 1985.
27. Bouzek 1985, 159.
28. Harding 1984, 179, n. 81.

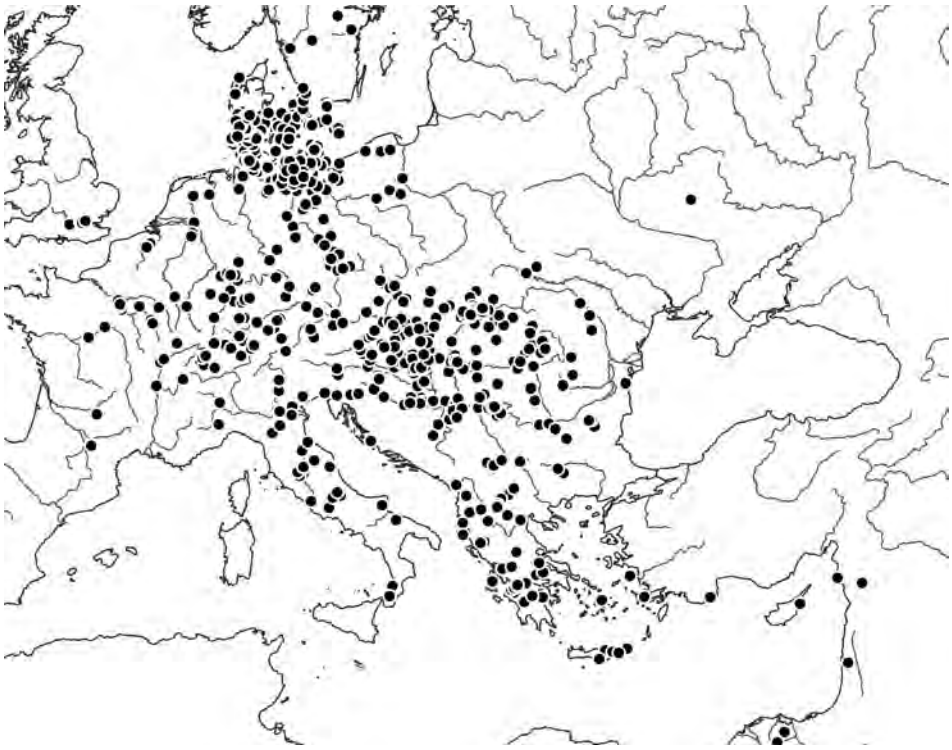


Fig. 2 *Distribution of Naue II type swords.*

Basin, mostly dated to the Early Mycenaean period.[29] There are also some (disputed) examples which possibly indicate analogies with Mycenaean forms and technologies from Central, Northern and Western Europe.[30] These include the finds from Nürnberg-Hammer (Germany), Ajak (Hungary), Dollerup and Ørskovhede (Denmark), Adliswill (Switzerland), Saône (France), Surbo (Italy), Pelynt (Britain) and Spišský Štvrtok (Slovakia), most of which date from the 14th (Br C2) to 11th (Ha A1) century BC.[31]

A different group of weapons is represented by the Central European cut-and-thrust flange-hilted swords of the Naue II type that appeared in the Aegean at the end of LH III B and throughout LH III C (Fig. 2). The earliest specimen come from Mycenae,[32] Langada on Kos[33] and Enkomi on Cyprus.[34] In

29. Alexandrescu 1966; Panayotov 1980; Kilian-Dirlmeier 1993; Warlde 1993.
30. Randsborg 1967; Mozsolics 1973, 29-3; Bouzek 1985, 120, 221; Thrane 1990.
31. Bouzek 1985.
32. Krzyszkowska 1997, 147.
33. Morricone 1966, 137-139.
34. Schaeffer 1952, 337-338.

the beginning, Naue II swords occurred with Mycenaean counterpart swords. However, since Central European swords were more efficient in combat, they quickly replaced the Mycenaean types.[35] Aegean craftsmen rapidly adopted Central European types of swords and began manufacturing them locally in modified forms.[36] Naue II turned out to be so versatile that in the 12th and 11th centuries BC it become the only type of sword used in temperate Europe, the Aegean and the Near East. In total at least 50 swords of Naue II type have been found in the Aegean and around 29 in the Near East.

During the 13th and 12th centuries BC, several flange-hilted Peschiera type daggers appeared in Mycenaean Greece as well, mostly on Crete. They originated in northern Italy and it seems that they were imitations of Mycenaean models.[37] Peschiera daggers spread all over Europe, from the Carpathians to France and from Italy and the Balkans to Denmark.[38] Their distribution can therefore be interpreted as an indication of a wider bronze working tradition embracing Central Europe, northern Italy and the Aegean. While none of the Aegean Peschiera daggers are datable by context, their European parallels belong to the 13th (Br D) and 12th (early Ha A1) centuries BC.

Alongside swords and daggers, new spearheads of so-called 'northern origin' appeared in the Aegean during the 13th and 12th centuries BC. They were mostly found in the Argolid, Achaea, Attica, Epirus, on Crete, Kephalonia and Ithaca as well as in Beotia, Corinthia, Phocis and Elis[39]. In terms of shape, three main types of spearheads can be distinguished: (A) lanceolate (*geflammte*), (B) with a midrib (being a hybrid between lanceolate and leaf-shaped forms), and (C) small leaf-shaped variants.[40] Many of these spearheads came from burials and were associated with Naue II swords as well as with Mycenaean spears, which suggests that they belonged to the standardized equipment of the Late Bronze Age warriors.

Another intriguing example of cross-cultural contacts is the Handmade Burnished Ware, which is handmade pottery that is coarse with large grits, and that is of a fabric that can be both micaceous and sandy. The ware's surface treatment is very uniform and the burnish colour always dark. A characteristic feature is the plastic decoration that includes finger-impressed ornaments, ledges and rims. Handmade Burnished Ware appeared in LH III B and was produced

35. Kristiansen 2002.
36. Catling 1961, 118-121.
37. Daniel and Evans 1975, 719.
38. Sherratt 2000, 96-98.
39. Bouzek 1985.
40. Snodgrass 1964, 116-119, 134-136.

well into the Submycenaean and Protogeometric periods.[41] Pottery of this type has been recorded on many Mycenaean sites and there is no doubt that it was foreign to Mycenaean ware manufacturing. Originally, the number of sites with Handmade Burnished Ware was probably much higher then the published examples suggest. However, its resemblance in terms of technology and fabric to Greek Neolithic or Middle Bronze Age products caused a general lack of scholarly interest in it. Handmade Burnished Ware found in the Aegean shows parallels to the pottery traditions of Troy, Italy, the Balkans and also Central Europe. Therefore, one possible explanation of its appearance in the Aegean may be sought in the arrival of new groups of people that might have originated in temperate Europe.[42] Integration of these newcomers into Mycenaean society is suggested by the coexistence of Handmade Burnished Ware and Late Helladic pottery as well as handmade vessels imitating Aegean shapes.[43]

The Development of cross-cultural communication in the European Bronze Age

Examination of the archaeological data makes it possible to distinguish four principal development phases of cross-cultural communication between the Eastern Mediterranean, the Aegean and temperate Europe in the Bronze Age. The beginning of these contacts actually pre-dates the Mycenaean Culture, as they occurred as far back as the end of the 3rd millennium BC. Therefore, it makes sense to broaden the scale of the analysis to include some earlier aspects of connectivity between the regions. This allows for a better understanding of the background of Mycenaean and European relations. The first distinguishable phase is dated from 2400/2300 BC to 2000 BC and its end marks the complete establishment of tin bronzes in Central Europe. The second phase, dated from 2000 BC to 1700/1600 BC, falls into the classical stage of the Central European Unetice Culture's development and the pinnacle of the Minoan Culture on Crete. The third phase is critical for the perspectives discussed here, because it encompasses the early and middle stages of the Mycenaean Culture. It spanned the period between 1700/1600 BC and 1300/1200 BC. In Central Europe, societies of the Carpathian Basin underwent a period of revival between 1700/1600 and 1500 BC, and the Tumulus Culture emerged. The fourth and last phase of interest here occurred after 1200 BC. It coincided with the late Mycenaean Culture in Greece and the Urnfield Culture in Central Europe.

41. Pilides 1994, 107.
42. Deger-Jalkotzy 1977, 64-80; Rutter 1990; Bankoff et al. 1996, 199-200.
43. Rutter 1975, 32; Jacob-Felsch 1987, 31; Kilian et al. 1981, 180-181.

The existence of cross-cultural communication between the Mediterranean, the Balkans and temperate Europe in the first phase is evidenced by the common occurrence of artefacts such as wound-wire pins (*Schleifennadeln*), riveted daggers, rings (*Lockenringe*), and ring ingots (*Ösenhalsringbarren*), such as recorded in Moravia and the Levant.[44] Furthermore, ceramic vessels resembling the iconic Aegean *kantharoi* have been recorded in the Carpathian Basin; a striking example of a cut-off rim vessel akin to MM I-II ceramic types was found in Hungary in a context dated to 2000 BC.[45] According to Kadrow, a Mediterranean influence is also visible in pottery (mostly bowls) with diagonally cut rims, recorded for example in southeastern Poland.[46] This type of ceramic has its closest analogy with specimens known from the southeastern Balkans and Anatolia.[47] In this case, however, the evidence suggests more indirect connections, because of the selective character of the elements being imitated.

According to Gerloff, the period between 2400/2300 BC and 2000 BC represents the opening of Near Eastern societies towards more systematic exchange and communication with Central Europe. Maran sees the roots of these events in the Balkans, demonstrating the existence of trade networks linking Early Helladic societies in Greece, the Adriatic and the Carpathian regions as early as the middle of the 3rd millennium BC.[48] This is evidenced in pottery forms and some prestige goods, the exchange of which was most likely linked to early metal trade. Moreover, large fortified settlements that appeared in the Balkans and in the Carpathian region show similarities to Anatolian and Aegean architecture, such as a division into *acropolis* and *suburbium* and the use of stone walls.[49]

In the second phase, dated to 2000-1700/1600 BC, cross-cultural communication intensified and encompassed the entire area under discussion.[50] The goods that were exchanged within this long-distance network included tin, copper, gold, amber and other perishable products. During this period, social stratification intensified in the Aegean and in temperate Europe. In both regions, rich burials appeared (e.g. in Mycenae, Pylos and on Aegina as well as in Leubingen, Helmsdorf, Łęki Małe, Tiszafüred and Thun-Renzenbühl), in

44. Gerloff 1993; Maran 2007.
45. Bouzek 1996, 180.
46. Kadrow 2007, 324-325.
47. Némejková-Pavúková 1999.
48. Maran 2007.
49. Gogâltan 2008.
50. Sherratt 1993, 24-29.

which large numbers of imports were found.[51] At the same time, metallurgical production intensified in Central and Western Europe as a result of the widespread use of tin bronze.[52] The development of new metallurgical technology led to the rise of powerful centres on the continent, where bronze and precious metals were worked. To secure access to new raw material deposits, it was often necessary to establish and maintain further cultural and trade contacts.

Between 1700/1600 BC and 1300/1200 BC, societies in the north and south of Europe entered a third phase in the development of cross-cultural communication; the most intense one yet. During this phase the Mycenaean Culture (LH III A-B) underwent great cultural and economic expansion after taking over long-distance trade routes in the Mediterranean Basin from the collapsing Minoan civilisation. Temperate Europe was characterized by the consolidation of regular cross-cultural communication and exchange. The opening of new Transylvanian copper deposits and access to Czech tin led to a revival of the Carpathian metallurgical centres, which in turn resulted in intense development in that region around 1700/1600 BC -1500 BC.[53] In other parts of Central Europe, the Tumulus Culture emerged and evolved.[54]

There is no doubt that during the third phase an extensive European communications and exchange network existed. At that time, the Balkans, on the periphery of the Aegean world, became a destination for political and economic expansion of the Mycenaeans.[55] Connections were also established with the highly developed Terramare Culture of northern Italy,[56] as well as first contacts between the Carpathian and the Mycenaean societies.[57] In addition, prestige chain exchange between rulers of individual groups allowed for, albeit indirect, communication with southern Scandinavia, especially Jutland.[58] It seems that it was predominantly the cultures of the Carpathian Basin that linked the Aegean and Eastern Mediterranean with eastern and northern European societies. Initially, these contacts were rather indirect and are evidenced by Carpathian (oblong) and Caucasian (round) horse harnesses as well as Baltic

51. Karo 1930, 1933; Kowiańska-Piaszykowa 1957, 1968; Strahm 1966; Iakovidis 1981; Zich 2004.
52. Krause 1998.
53. Sherratt 1993, 29.
54. Jockenhövel 1991.
55. Wardle 1993.
56. Jung 2006.
57. Gancarski, eds., 2002; Palincaş 2007.
58. Kristiansen 1987.

amber that appeared in mainland Greece.[59] In temperate Europe on the other hand, several metal vessels with analogies to Mediterranean specimens[60] and Cypriot daggers have been found,[61] as well as a number of rapiers and bronzes decorated with running spiral motifs, considered by some scholars to be either Mycenaean imports or their local imitations.[62] The relations between the north and the south of Europe at the end of the third phase, i.e. 1300/1200 BC, were direct and can be linked to migrations, during which numerous items of so-called 'northern origin' appeared in Mycenaean Greece, such as: weapons, dress fasteners, personal ornaments and jewellery.[63]

The fourth and final phase in the development of cross-cultural communication is dated to the period after 1200 BC. In the Aegean, this overlaps with the final period of the Mycenaean civilisation and its later decline. In temperate Europe, it coincides with the emergence of the Urnfield Culture, known for its expansionism that resulted in significant cultural unification of an area stretching from modern day Hungary to France and from the Alps to the North Sea.[64]

In the 12th century BC, significant political, social and economic changes occurred in the Mediterranean which are generally attributed to the migrations of the Sea Peoples.[65] These events had serious consequences, causing a partial collapse of exchange and communication networks and a decline of political and economic entities like the Mycenaean Culture, the Hittite Empire and cities of the Levant (e.g. Ugarit). Event Egypt and Mesopotamia were significantly affected. In the following period of the Post-palatial economy, a majority of cultural and trade contacts of the Mycenaean societies weakened; however, connections to southern and northern Italy were maintained.[66] European bronze items, as well as decorations and symbols (such as birds *protomae* and solar discs) continued to appear in Mycenaean Greece as a result of the expansion of the Urnfield Culture.[67]

59. Harding and Hughes-Brock 1974; Harding 2005; Hughes-Brock 2005.
60. Sherratt and Taylor 1989.
61. Catling 1964.
62. David 1997.
63. Harding 1984; Bouzek 1985; Lewartowski 1989; Sherratt 2000.
64. Plesl and Hrala 1987.
65. Popham 1994.
66. Jung 2006.
67. Harding 1984; Bouzek 1985; Lewartowski 1989.

Conclusion

Cross-cultural communication as a form of human interaction is a universal and fundamental driver of any society's development. Its study, through the proxy of material archaeological evidence, sheds light on a large variety of social processes and historical epochs. The European Bronze Age is an illustrative example of this. Increased connectivity, driven by migrations and exchange, led to the growth of diversity and dissemination of technological skills, innovation and wealth. But it also resulted in a more unequal distribution of goods, as only some people controlled important resources or critical parts of the networks. This caused stronger social stratification and the emergence of new hierarchies. In turn, the need to control resources created more potential for aggression and hostilities. The wide dissemination of different types of weaponry, presented in this article, reflects the highly interactive nature of warfare.[68] Weapons and methods of combat are shaped by constant competition between warring factions and any successful novelty is very likely to be rapidly adopted and spread over vast regions by 'warriors on the move'. At the same time, raising, organising and training armies to be proficient within a fighting system is an expensive effort in terms of resources, which leads to the arranged and standardized nature of weapons and fighting techniques. All of this is reflected in a booming weapons technology, the rise of warrior aristocracies and the luxurious lifestyles of Bronze Age elites – Europe's 'first Golden Age'.

The archaeological evidence for socio-political organisation, cultural boundaries, communication networks and the mobility of people, goods, technologies, and ideas provides a material base for rich interpretational frameworks. The following are some suggested hypotheses. (A) The artefact distribution patterns can best be explained by different spheres of interaction (trade and exchange, warfare, migrations, individual travelling, etc.), with different scales and different intensities. (B) The evidence indicates that flow from temperate Europe to Mycenaean Greece was stronger than the other way around. This suggests a significant socio-economic gradient. (C) The nature of the relations changed over time. Exchange and communication networks eventually allowed individual travels and direct contact. There seems no doubt that the motivations for travelling diversified, as did the strongly connected societies themselves.

68. Carman and Harding, eds., 1999; Otto et al., eds., 2000.

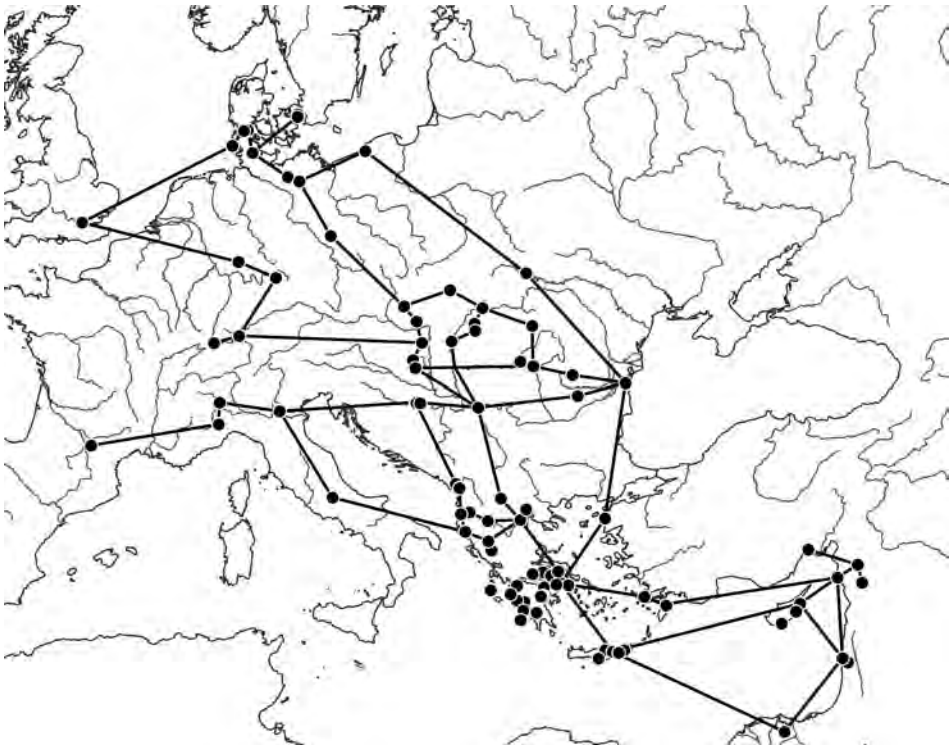


Fig. 3: *Reconstruction of approximate communication networks, based on occurrences of Naue II type swords.*

Fig. 3 presents a generalized and approximate reconstruction of the communication networks as supported by the distribution of the European swords of type Naue II, but also by finds of other metal weaponry, dress fasteners and jewellery. This reconstruction does not include all possible sites and connections; it shows only the most important routes between those centres with archaeological evidence of cross-cultural communication dated generally to 1300-1100 BC. It should be noted that geographical networks, such as road networks, have specific properties. They are physical networks that existed in the landscape and consisted of sites such as villages, towns and settlements, and the connections between them, such as roads, pathways or shipping routes. Objects, ideas and people moved ("flowed") through these networks.

In contrast to social networks *sensu stricto*, the nodes (places) in such a topographically constrained network (i.e. its "configuration") are largely stationary and their flow capacity (e.g. the number of travellers that can use a single road at the same time) fixed. This means that the role and importance of any place within such a network is determined (at least to a significant degree) by its geographic potential. Although the connectivity of places can be modified

(e.g. by constructing new roads), such changes require considerable investment of resources and with the ultimate limitation that a bad geographic location cannot be turned into a good one. It is important to keep this in mind when applying methods and perspectives of social network analysis that often assume "soft", immaterial links between actors that are easily reconfigured.

In this respect, the structure of the network in Fig. 3 is largely determined by natural pathways such as rivers and navigable coasts, as well as barriers like mountain ranges and rugged coastlines. It appears that the flow of communication between temperate Europe and the Aegean went primarily via Italy and the western Adriatic or the Carpathian Basin and Black Sea region. Within mainland Europe, the river network favours North-South connections, but the Danube and its tributaries form the single most dominant link that crosses large parts of Europe from east to west.

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Engraving the ships. Shared ideas and practices

Katarina Streiffert Eikeland

Traces of ships can be seen on rock engravings, i.e. carvings or graffiti, along the coasts of Cyprus and the Levant. These engravings are frequently interpreted on religious grounds, however, the interpretation of these maritime images must be distinguished from different perspectives and reconsidered as a more complex phenomenon. Trans-maritime navigation was one of the prime mechanisms behind the complexity of Bronze Age society and it is therefore likely that the seafarers themselves had a great impact on the iconography. What we see is a shared local practice that mediates intrinsic ideas involving images of ships and mariners. This type of maritime image is represented in many parts of the coastal area of the Eastern Mediterranean, yet the images show a clear variety in contextual placement and are found in opened landscapes, sanctuaries, as well as within the household. The contextual variety of the maritime engravings has hitherto not been discussed and, furthermore, the reason(s) for the variety are unclear and need to be elucidated. Above all, the important and neglected issue of whether these maritime images were restricted to specific groups or accessible for all members of a society will be taken into account and reconsidered. In terms of global perspectives, contextual variety will also be highlighted from a Southern Scandinavian point of view.

Maritime practice – the setting

Trans-maritime navigation was one of the prime mechanisms behind the complexity of Bronze Age society. It gave rise to a highly complex network of trade as well as cultural connectivity on a whole. Nautical ventures, however, had a down-side. Every route was a dangerous undertaking for the crew as well as the ship and its cargo. It was not just the construction of the ship that was crucial for the security of those on board, the anchors were of just as much importance. According to Honor Frost:

> "…the security of any sailing ship, ancient or modern, when storm-driven towards shore, depends on its anchors. Only their hold stands between a ship and destruction coupled with the possible death of the crew, hence the retention throughout recorded history of the anchor's sacred significance."[1]

The archaeological record from Canaanite and Phoenician contexts let us understand that maritime votives are noticeable in the dedicatory anchors and model ships from the temples of Byblos. The offering of anchors can also be found in the Temple of Ba`l in Ugarit, and the temples at Kition-Bamboula (Cyprus) and Tell Sukas, today's Syria.[2] Whether you were a fisherman, a merchant at sea or a sailor, the maritime lifestyle at sea was a dangerous venture and gave rise to a set of preventative practices. Consequently, the uncertain lifestyle at sea generated a specialised maritime religion.[3]

How can we study maritime culture, frequently associated with religious practice, in archaeological terms? One way is to look at stone anchors from adequate contexts, but ship engravings, i.e. graffiti or carvings, are an additional aspect of utmost importance. They are suggested to have been a form of worship, or ex-voto, and some kind of cultic offering devoted by mariners in order to show gratitude for past successes as well as safe journeys in future endeavours.[4] Ships are considered to have been imbued with a protective spirit and also contained sacred spaces.[5] Following this line of thought, it is not difficult to picture the need to manifest and integrate the ship as a maritime symbol in the surroundings of the ancient seafarers.

Ancient ships have been conveyed with multiple representations through time. In the Mediterranean area ships are frequently depicted on painted vases, as small clay models, and as carved images on stone. Since this study focuses on the specific subject of ship-carvings/graffiti and its accessibility, it is necessary to reconsider the notion of whether the engravings were only for mariners.

Aaron Brody states that: "*The dangers of navigating on the Mediterranean and the seeming whimsy of its winds and tides generated religious needs of seafarers that were not shared by members of society who never left dry land*"[6] However, the question is whether the archaeological record can offer us another picture than that of a purely mariner cult. By looking at the contextual placement of the images, is

1. Frost 1985, 281.
2. Brody 1998.
3. For seafarers´ religion see Brody 2008.
4. Bash and Artzy 1983, 322; Artzy 2003, 244.
5. Brody 2008, 444.
6. Brody 2008, 444.

it possible to discuss whether the images were accessible to non-mariners within the society? Ships in the form of carvings can be seen in prehistoric sanctuaries as well as in much later periods. A plethora of these images are also seen on Christian churches.[7] The sacred value of the ship is thus rooted to what seems to be a sacral tradition. From this point of view, is the idea that the maritime carvings were only associated with mariners' religious practice due to this long-lived tradition, and consequently, our preconceived notions? Furthermore, do we have evidence to outline alternative settings concerning accessibility to the maritime images? In order to elucidate these issues, a number of sites showing maritime engravings from Cyprus, the Levantine area, and Scandinavia will be dealt with.



Fig. 1: *Map over the sites with maritime engravings mentioned in the text (map revised by Gülbin Kulbay).*

7. Basch and Artzy 1985, 322.

Cyprus

Kition

Kition was one of eight major coastal towns on Cyprus during the Late Bronze Age. Today one finds the remains of ancient Kition below the modern town structure of Larnaca (*c.* 2-4m). The town was fortified and *may* have had an inner harbour.[8] The archaeological data presents a settlement filled with workshops (copper workshops for instance) and temples. Particularly noteworthy is the relationship between copper production and religion on Cyprus, a hypothesis based on the close spatial relationship between bronze-working facilities and religious structures.[9]

The anchors at Kition

There are two temenos and five temples at Kition. Temples 2 and 3 belong to the LCII period: temple 2 was reused in LCIII forming one unit with temple 1, while temple 4 and 5 constitute another sanctuary unit.[10] It is noticeable that all of the temples (with the exception of temple 3 which was small and damaged), as well as the temenos, contained a number of stone-anchors that were used as part of the building construction; a fact of great interest to this study.

The walls of temple 4 (in area II) contained anchors with incisions: find no. 5130, 5131 and 5140. This was also evident in temple 2: find no. 2618. Some of these incisions have been interpreted as arrows, but the marks seem to display the part where the oars were placed in the vessels. It is interesting that these anchors all lack use-marks which tells us that they were never used at sea.[11] Following Honor Frost, no temple anchor shows signs of wear[12] which suggests their votive significance.[13] The temple-anchors have had cupules cut into their top surface, rendering rough-hewn backs (i.e. the downwards facing side was not intended to be seen) as well as fresh chisel cuts and unfinished piercing sets. All this suggests that these temple anchors had been made ex-votos.[14] The intrinsic religious meaning of placing stone anchors in temple-walls should perhaps be put in relation to the fact that they were also deposited in tombs.[15] Since the anchors

8. Demas 1985.
9. Knapp 1986.
10. Karageorghis 1985, 253.
11. Frost 1985, 282.
12. Frost 1985, 282.
13. Frost 1985, 290.
14. Frost 1985, 284.
15. Frost 1985, 281.

lack use-marks, it is possible that they were placed in a ritual environment in order to integrate a maritime feature as a complement to the religious contexts.

Ship graffiti at Kition

There are additional examples of maritime practice associated with a seafaring cult at Kition. Ashlar blocks, rendering numerous graffiti of ships, were found in the southern wall of a temple with two or three additional inscriptions found on blocks from the altar of temple 4. Since the blocks are found within structures of religious association, the temples are suggested to have been dedicated to a deity who protected navigation.[16] The contextual placement of these images, in relation to the site´s geographical position in the bay, is an additional factor strengthening the possibility of finding "*mariners' influence on the cult*".[17] Their sacral association located in a temple area is hard to question.

Ship graffiti in Temple 1, Area II and Temple 4

Nineteen engraved ships are depicted on the orthostat of the southern wall of temple 1.[18] The wall consists of eight ashlar blocks, each of which measure approximately 1.5 x 3m.[19] The wall has been exposed to severe weathering which has unfortunately given rise to a range of interpretations when it comes to reading the images.[20]

One of the images in temple 1 is ship no. 13 (see Fig. 2a-c) which is currently interpreted as a long boat[21] or perhaps a ram carrier long ship.[22] Looking at the picture there seems to be a circular cavity within the carvings (see Fig. 2a). There are examples in Scandinavia of ram carrier long ships which contain a cup mark that has been interpreted as an eye. Following Aaron Brody, the eye, placed at the ship´s prow, could guide the vessel and ward off harm.[23]

16. Basch and Artzy 1985, 323.
17. Basch and Artzy 1985, 323.
18. Basch and Artzy 1985, 324; Wachmann 2009, 147.
19. Westerberg 1983, 17.
20. Basch and Artzy 1985, 324.
21. Artzy 2003, 238.
22. Basch and Artzy 1985, 328.
23. Brody 2008, 448.

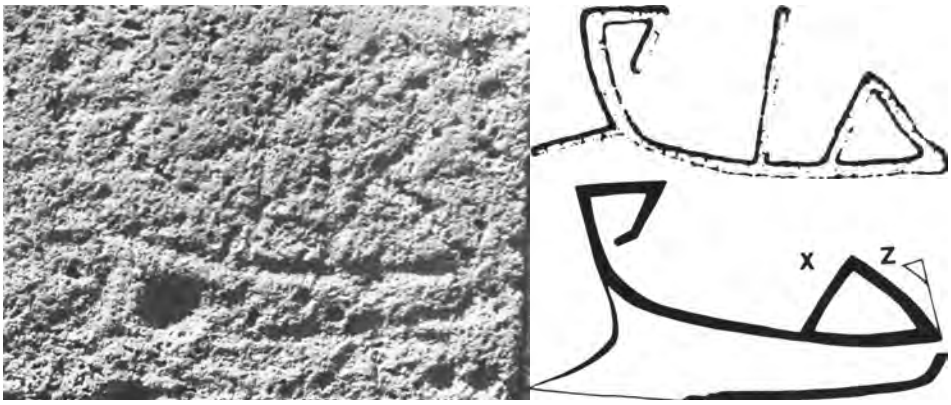


Fig. 2a, b and c: *From the left ship graffiti no. 13, temple 1, drawing of ship and alternative "reading" of the motif (after Artzy and Basch1985).*

The maritime engravings in temple 4 are found on the two vertical limestone slabs which make up the altar or table of offerings (see Fig. 3). A seafaring cult is suggested due to the numerous finds of anchors in the same area, possibly with the temple dedicated, as mentioned, to a deity who protected navigation.[24] Some of the ships, or more precisely the "round ship" from Kition, are linked to the Tel Akko graffiti in Northern Israel which is suggested to be of Sea People origin.[25] The same type can also be labelled as a "fan type" boat.[26]

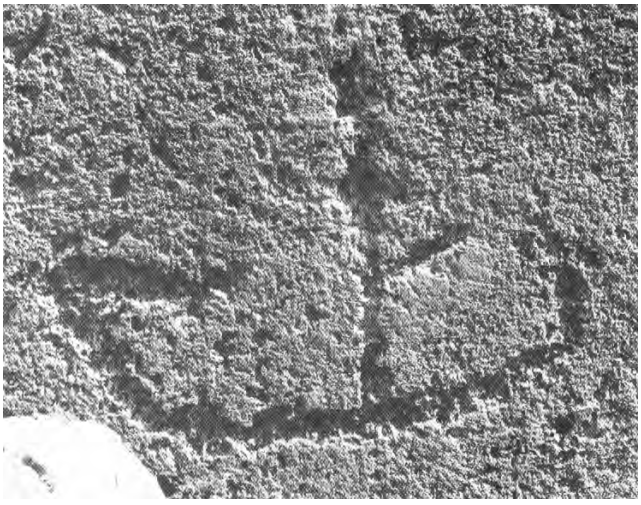


Fig. 3: *Ship on altar (after Artzy and Basch 1985).*

24. Basch and Artzy 1985, 323.
25. Wachsmann 2009, 148.
26. Artzy 2003, 232.

Miscellaneous traces of cult activity

In the temple area at Kition, among anchors and engraved ashlar blocks, there is material evidence associated with opium. For instance, one ivory pipe, no. 4267, found in and associated with temple 4, is suggested to have been smoked in temple 5. The last suggestion is strengthened by the presence of a cylindrical vase, no. 4219,[27] which has parallels with the sanctuary of the goddess of Gazi in Crete.[28] It is also believed that the twin temples 4 and 5 were dedicated to divinities connected with fertility. One ivory plaque, no. 4252, found in temple 4, also has an association to fertility since it depicts Bes – the god who helps women in pregnancy. Vassos Karageorghis raises the question of whether the drug was only used as a tranquiliser or if it was used in combination in order to "*create a mood of euphoria*." [29] The association between opium and pregnant women is an unpleasant thought in my opinion, and hopefully wrong since there is no need to make this association given that pregnant women seldom need drugs during pregnancy, but they can of course be useful when a woman is in labour. In this case a temple is most probably, but conclusively, the wrong arena for drug use. Bearing in mind that although the god Bes was mainly the protector of households and in particular mothers and children, he was also a symbol for music, dance and sexual pleasure. These activities are perhaps more naturally connected with opium use due to its relaxing quality. The temple area was accordingly probably not only for mariners as the artefacts imply it was also open to others – perhaps also women.

Hala Sultan Tekke

The closest neighbouring settlement to Kition is Hala Sultan Tekke. The geographical proximity of Hala Sultan Tekke (about three kilometres), as well as to the many harbour towns which prospered around the Larnaca Bay during the Late Bronze Age e.g. Pyla, Arpera and Livadhi, might indicate some kind of commercial team-work between these sites. This hypothesis is based on a second possibility; that they shared the natural resources of the region, e.g. copper, salt and access to land. This in turn supports the idea of organized trade in the area.[30]

27. Demas 1985, 131.
28. A figure of a "goddess of narcotic" (*c*. 1300 BC) was found in the sanctuary of Gazi. Source: Wikipedia. Another name for this Minoan goddess is "goddess of poppies, patronage of healing." She wears a crown (or hairpins) displaying three standing poppy capsules. This was found in connection with a simple smoking apparatus, i.e. a cylindrical vessel.
29. Karageorghis 1985, 329-333; Karageorghis and Demas 1975, 259.
30. Karageorghis and Demas 1985, 3.

The town shows strong evidence for commercial links with many other regions in the Mediterranean area. Hala Sultan Tekke was a wealthy harbour town during the Bronze Age – a prosperity that may be related to its location. The Salt Lake we can see from the site today was once a lagoon that opened out to the sea giving the adjacent settlement the benefit of the largest natural harbour in the Eastern Mediterranean.

Focusing on the topic of engravings, or graffiti for that matter, there are also examples at Hala Sultan Tekke, however, these are not represented in the temple areas at the site; they are instead located in contexts interpreted as living-areas.

Ship graffiti in Room 4, Area 22

Area 22 is located in the most southern part of the excavated area of the site. One ashlar block with maritime connotations was found in room 4, N4014 (see Fig. 4). The ashlar block depicts a man with a pointed cap and a spear in his outstretched hand who is standing in a boat with a high prow.



Fig. 4: *Detail of graffiti on N 4014. The image is a part of a larger block, see Fig. 4 (courtesy of Öbrink 1979).*

The slab was lying on its narrow, incised long side when it was found and was not *in situ*.[31] The incised ashlar block was found close to another block, F6079 (without incisions), which was also resting on one of its narrow long sides; this block was *in situ* however. It seems reasonable to suggest that the position of N4014 may have had a similar position to F6079. The blocks could have served as pillars or aniconic stones near the entrance or gate, as suggested by Ulla Öbrink.[32] If they were, then they consequently constitute markers of an entrance into an area of perhaps maritime importance.

The original position of the two ashlar blocks in the room is not self-sufficient; they were surrounded by a wall-structure. It has not been determined whether they were vertically or horizontally integrated. The image on N 4014 is best seen from a horizontal orientation which may also indicate the original horizontal positioning of the slab (see Fig. 5).

31. Öbrink 1979, 5.
32. Öbrink 1979, IV.

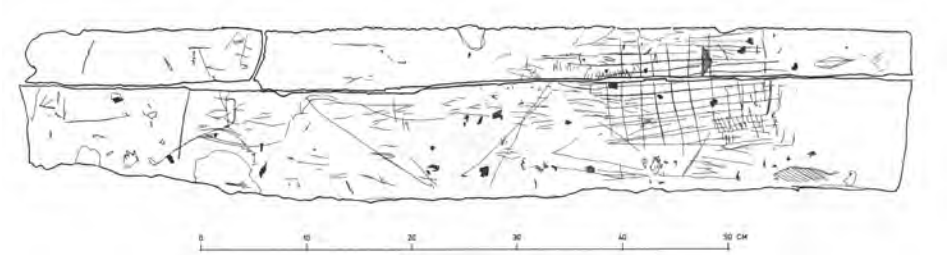


Fig. 5: *Ashlar block N 4014. The man with a spear in his hand who is standing in a boat (detail on Fig.3) can be seen in the first left quarter of the block (courtesy of Öbrink 1979).*

It is also possible that the block was deposited in the way it was found in order to hide the incisions that perhaps gave a divine or cultural status. If this is in fact the case, then it is *the hidden presence of a maritime image* that is the most interesting fact - not its actual physical position. In the following text a similar hidden motif will be discussed. It was rendered on another slab, F 1093 in area 8, and may provide evidence towards this ritual practice.

There are some researchers within the Scandinavian archaeology of rock carvings who frequently connect the images to ideological and cosmological aspects.[33] Following Kristian Kristiansen *"…the placing of settlement, barrows, cemeteries, sanctuaries or rock art can be understood as meaningful in relation to the cosmological and religious order of life."*[34] The images on N 4014 may connect to ideological or cosmological considerations, but it could just as well connect to more specific, practical aspects like maritime trade or the fishing industry. Both are reckless enterprises that require a great deal of care – before and after an excursion. The presence of a maritime image within a household may offer a closer relation between the members of the household(s) in area 22, and perhaps the sharing of a social practice that some of the household members may have been a part of. The possibility that room 4 accommodated fishermen may be strengthened by the 34 drilled net-weights found in the same room. From this point of view the consideration made by Aaron Brody about the protective spirit the ships were imbued with, as well as the sacred space procured by its very presence, seems to be a reasonable assumption for room 4.

The images on N4014 (see Fig. 4) are paralleled by Enkomi-Alasia (see Fig. 6). This specific image is discussed by Lionel Casson who considers it to reproduce "*every feature of the Syros ships down to the projection at the stern. It also includes a sail – presumably the mast was stepped and sail stowed away in*

33. Kristiansen and Larsson 2005; Fredell 2003.
34. Kristiansen and Larsson 2005, 135.

all the other representations – which is shown bellying toward the high end."[35] The graffiti is damaged, particularly on the upper part of the image. It is hard to tell whether the ship was a warship under sail in the Helladic tradition, or an Aegean long ship – which has never been seen with a mast before.[36]

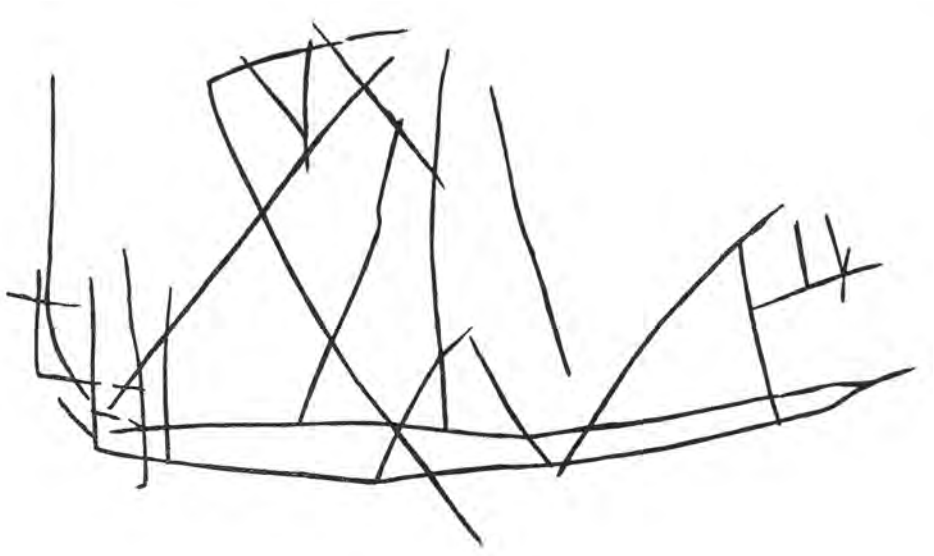


Fig. 6: *Graffiti from Enkomi 1200-1100 BC (after Schaeffer 1952, fig 38).*

The scene depicted on slab N4014 (Fig. 4), may have a second parallel on another stone slab from a Late Bronze Age building in the Canaanite city Lachish, in the southern part of modern Israel.[37] Like in Kition, a temple has also been located in Lachish which belonged to the Late Bronze Age period.[38] In 1975 two large hewn slabs were found showing a series of ancient interwoven graffiti. The central image rendered the head and upper torso of a deity armed with a lance. Similar to the man with the pointed cap found on the block from Tekke (N 4014), the god is depicted with a long beard and large eyes. However, it is the conical

35. Casson 1995, 31.
36. Wachsmann 2009, 143.
37. Öbrink (1979, 17) referring to the parallel in C. Schaeffer, *Enkomi-Alasia* , Paris 1952: 102, fig. 38, pl. X. (cf. D. Ussishkin, Lachish renewed archaeological excavations, Expedition 20:4, 1978: 20.22).
38. Christa Clamer and David Ussishkin 1977, in *The American School of Oriental Research.* Source *Biblical Archaeologist* vol. 40:2, May 1977. A Canaanite temple in Tell Lachish, 71-77.

cap he is wearing[39] that may be comparable with the graffiti from Hala Sultan Tekke.[40] Lachish, like many other sites, was destroyed at the end of the Late Bronze Age[41]– just like Hala Sultan Tekke.

Parallels within the site are difficult to find, but one other ashlar slab F1291, in the nearby area 8, has chiselled marks on its narrow side.[42] The marks may represent the *wavy* lines of the sea. Perhaps the most important aspect for making the maritime association is the contextual circumstances; the slab was found close to a stone anchor (F1254). A second parallel from Tekke is F 1093, also found in area 8.[43] This block has a number of circular cavities and regular *undulating* chiselled grooves. According to Gunnel Hult the marks are *"…difficult to explain […] purely as the marks of quarrying tools. If they were made for some ritual purpose, this must be in connection with a secondary use of the stone, since the other sides, except one long narrow side, are well dressed and very smooth and would rather have been meant to be visible."*[44] It was found with the cavities turned downwards – they were hidden just like the slab in room 4, area 22. There are parallels for this practice in Scandinavian contexts. Some burials contain stones with cup-marks, deposited with the cup-marks upside down. There are also examples of burials with figurative motifs hidden inside the grave. This phenomenon is also detectable in the Israeli grave context of burial cave 557 at Maresha. The ships found here are of later date e.g. the Hellenistic period.[45] Hidden maritime associations are probably an important aspect to highlight. In Scandinavian contexts there are ship-burials from the Early Bronze Age *c.* 1300-1100 BC which were constructed underground, hence avoiding exposure. In later periods the monuments were instead much more available in open terrain. The function of the ship as a symbol is thus expressed in two different social contexts[46] where the social expression seems to be linked to a specific period.

Other parallels can be traced to Enkomi- Alasia and to Lachish[47] but also to Kition.[48] At Kition, however, the ashlar blocks rendering numerous graffiti of ships were found in the south wall of temple 1 with some two or three additional

39. Clamer and Ussishkin 1977, 76.
40. See also Öbrink 1979, 17.
41. Clamer and Ussishkin 1977, 71.
42. Hult 1981, 16, and fig. 134.
43. Hult 1978, 4, fig 24.
44. Hult 1978, 4.
45. Artzy 2011.
46. Cf. Artelius in Streiffert Eikeland and Miller 2013.
47. Öbrink 1979, 17.
48. Begg 2004; Karageorghis and Demas 1985.

found on blocks of the altar in temple 4. The religious or ceremonial contexts for this maritime type of images connected to Kition may also give the incised ashlar block in room 4 another intrinsic meaning than the ordinary household perspective. Although room 4 seems to constitute a higher level of social complexity compared to many other rooms in area 22 due to the variability of the material culture, it may still be interpreted as a household unit. The maritime incisions in this specific area connect with the maritime activity within the harbour site. The incised image N4014, interpreted by Öbrink as a man with a pointed cap and a spear in his outstretched hand who is standing in a boat with a high prow, may here be given associations to maritime religious or ceremonial practices. In a recent article Aaron Brody discussed the protective spirit the ships were imbued with as well as the sacredness they procured by their very presence.[49] Öbrink also speculates on the meaning of the blocks. She raises the possibility of them to being stelae (since N 4014 has a rounded top) or aniconic representations of divinities.[50]

Ship graffiti in Room 10, Area 22

Room 10 is an additional room within area 22 in which ashlar blocks, depicting maritime images, were found. The graffiti motif, rendered on the intact long side of the ashlar block N 4007 (see Fig. 7), shows part of a roughly drawn ship.[51]

The best preserved part of the image depicts the upper part of the prow. Just like the block in room 4 and the block in area 8, the image on N 4007 (Fig. 7) was found with the motif turned upside down.

At the edge of one narrow long side, a semi-circular depression surrounded by a worn area, could be seen. The block also had four cavities which were irregularly placed, yet represented on all four long sides. They have been interpreted as mortises (?)[52]

Parallels for the prow on N4007 can be found on a relief in Babylonian that depicts the Phoenicians delivering cedar from Lebanon. Important circumstances in this room are the high representation of Canaanite pottery and the ashlar block with an image that may be connected to Canaanite identity. The question raised is whether this is material evidence of a Canaanite household? Without any connection to the many examples of Canaanite pottery, but simply looking at the

49. Brody 2008.
50. Öbrink 1979, IV.
51. Öbrink 1979, 16.
52. Öbrink 1979, 16f.

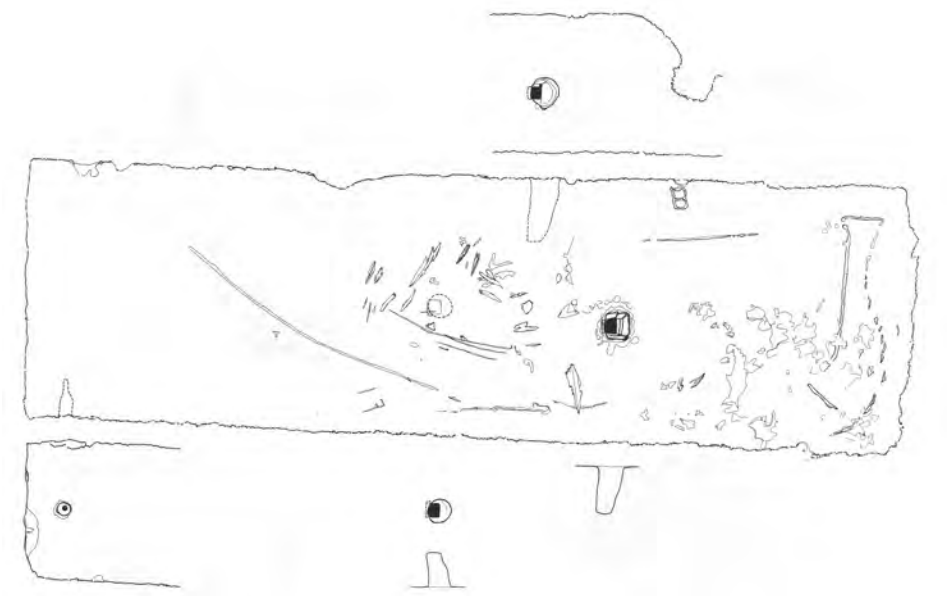


Fig. 7: *Ashlar block N 4007. At the right side of the block the upper part of the prow is rendered (after Öbrink 1979).*

iconography, Shelley Wachsmann suggests the graffiti on the ashlar block N4007 displays a Syro-Canaanite ship.[53]

Room 10 was also the only room that contained sherds of the highly unusual ware of Late Minoan oat meal fabric. Of the 111 sherds found in area 22, 100 were found in room 10 and formed a stirrup (?) jug of LC III1A date.[54]

The Carmel Ridge, Northern Israel

The Late Bronze Age Canaanite settlement of Lachish, modern Israel, was previously shown to as a link between the maritime symbols at Hala Sultan Tekke and the Levantine area. The following text will exemplify the existence and location of maritime rock carvings among some coastal sites at the Carmel Mountain in Northern Israel.

53. Wachsmann 2009, 49f.
54. Öbrink 1979, 42.

Tel Akko

Tel Akko is situated in the northern part of the Israeli coast. The site was situated in a considerably sized fertile agricultural hinterland, but above all it was a prospering harbour town. Geological data shows that the site was surrounded by water on the north-west, west and south. An estuary could easily reach the site from the sea.

Tel Akko had an advantageous location since it lay at the intersection of maritime and terrestrial routes that encouraged trade and traders to the site which functioned as the administrative and trading centre for Southern Syria, Poenicia and Eretz-Israel.[55] Its importance is demonstrated in the Amarna letters in which Akko is mentioned at least 13 times.[56] From the Middle Bronze II, Tel Akko was continuously inhabited until the Hellenistic period.[57] The ancient structures of Akko were situated 10-12 meters above the present shoreline.[58]

Area H

Within the settlement, on the northern rampart (Area H), a unique cultic area was detected.[59] A small altar with carvings (ca 24 x 26 x 30cm) was discovered (see Fig. 8) that depicts a scene representing four ships. It is suggested that it would have been portable and initially used on board a ship but eventually ended up at the site of Tel Akko where it was later unearthed. The engraving – composed of a mixture of techniques including grooving and drilling along plain incisions - depicts four boats of the so called "fan type" similar to the example that was visible on the outer wall of temple 1 and 4 at Kition.[60] The fan type boat has a prow which bends inwards. The Akko graffiti is linked to Aegean ship representations.[61] According to Artzy, the fan on the altar, was *"... possibly exaggerated to accentuate its ritual importance. It served as a way of identifying the group that built the ships and those who engraved them on this altar and on the altar and wall at Kition."*[62]

On the altar, mixed with ash, three quartz stones (about the size of an orange) were deposited. Two of them were engraved: on one of the stones a boat engraving

55. Beeri 2008.
56. Artzy 2006, 50.
57. Artzy 2006, 60; Artzy and Beeri 2010.
58. Raban 1991, 138.
59. Artzy and Beeri 2010, 18.
60. Artzy 2003, 232; Artzy 1987, 76f.
61. Wachsmann 2009, 203.
62. Artzy 1987, 77f.



Fig. 8: *The engraved ships on the Akko altar (courtesy of Artzy).*

was found. The image is less than 2 cm in width, showing a boat with everted stempost.[63] Three figures can be seen on board the boat with a dolphin (or a tuna) swimming below it.[64] A dolphin is depicted on the other stone.[65]

63. Artzy 2003, 239.
64. Artzy and Beeri 2010, 18; lecture given by Michal Artzy 2010.02.11.
65. Artzy 2007, 185; Artzy and Beeri 2010, 18.



Fig. 9: *Tel Akko, Area H. Pottery in situ, associated with the altar (courtesy of Artzy).*

The altar was found on the tell itself within the occupation-area designated as area H, Square L-7, and dated to the end of the 13th early 12th century BC.[66] In the earliest habitation-area, a pit filled with an abundance of imported pottery, especially from Cyprus, was found. The altar, which was connected by a row of stones to a partially lined *bothros*, was found approximately 5 meters from the pit (see Fig. 9). There are no architectural elements that associate with the altar, but it is possible that the altar may have been covered with some type of temporary construction.[67] It is also likely that the bothros was once roofed.[68] The ceramic material confirms that Tel Akko was an active maritime trading partner, particularly with Cyprus.[69]

66. Artzy 1987, 75.
67. Artzy 2007, 184f.
68. Artzy 2006, 117; Artzy and Beeri 2010, 18.
69. Artzy and Beeri 2010, 18.

Tel Nami and Nahal Ha-Meàrot

The anchorage settlement Tel Nami is located on the southern coast of Carmel. Nami, an international maritime trading center, was initially occupied in the Middle Bronze Age IIA period (*c.* 13th century BC), as well as in the final part of the Late Bronze IIb period.[70] The site is located ca 3-4 km west from where Nahal Me'arot - the river on which Nami was dependent – leaves the Carmel Ridge. Despite the lack of evidence of an anchorage, Nami should somehow be connected to the outlet of the river.[71] Nahal ha-Mearot is also the area where most of the engravings have been found (see Fig. 10 and Fig. 11).[72] Numerous boat representations were discovered here during a regional survey by Michal Artzy and her team.

When approaching Nami from the sea, ancient mariners must have used navigational landmarks to be able to accomplish a safe anchorage. One of the landmarks in the area was most probably the cavity in the Carmel Mountain carved out by the Mearot River rising from the limestone rock. The location of Nahal ha-Me`arot must have stood out to travellers at sea and it is likely that the site once served as a landfall. The environment of the site is described as *"(t)he southern cliff drops sharply in an almost straight edge while in the northern area, there is a triangular form which can best be described as a pyramid-shaped rock. The complete composition, which from afar looks much like a crevice, might have lent the name mgr (Mugar), a Semitic word meaning 'cave', to Nami."*[73] Graffiti of boats are cut onto the cliffs. Looking at the contextual placement of the engraved ships, one finds one on the outcrop of rocks in Nahal ha-Me`arot north of the 'pyramid'. This carving is of particular interest due to its size and the depth of the carving.[74] The image rendering of an Aegean longboat finds parallels in a number of 1200 BC contexts.[75]

An additional carving is found on the pyramid-shaped rock on the northern bank of the Nahal ha-Me`arot crevice (see Fig. 12). The carving, only 6 cm in length, shows a mast, a yard and a rolled sail. The prow may render the head of a bird or an animal. This, and many other carvings on this rock, face the sea. One boat-carving depicts a mast, yard and a furled sail.[76] On the rock of the exit of the Mearot River, there are ex voto incisions of a boat. These are interpreted as bench-marks for approaching mariners.[77]

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70. Artzy 1997, 7; Artzy 2003, 244; Artzy 2007, 13.
71. Artzy personal comment.
72. Artzy 2003, 244.
73. Artzy 2003, 234.
74. Artzy 2003, 234.
75. Artzy 2003, 237.
76. Artzy 2003, 241.
77. Artzy 2010.



Fig. 10: *Entrance to the Nahal Me'arot. The circle encloses the concentration of the ship engravings (courtesy of Artzy).*



Fig. 11: *Nahal Me'arot the area of ship graffiti. The circle encloses the concentration of the ship engravings (courtesy of Artzy).*

The fan type boat is also found in other areas like Nahal ha-Me`arot, located on the western side of the Carmel Ridge. Next to Nahal ha-Me`arot are the Carmel Caves, which have been inhabited in various prehistoric and historic periods. Engravings from Epipaleolithic and Neolithic periods are frequent, however, few figurative engravings have been distinguished from these early periods.[78]

In 1967 E. Wreschner and M. W. Prausnitz discovered one ship graffiti near the top of the valley´s northern bluff.[79] According to Artzy:

> "it is likely that these engravings were made by mariners, familiar with other parts of the eastern Mediterranean who inscribed the images of their trade on the landmark to which they owed their safe arrival, a form of ex-voto practice, or a terrestrial bench mark by the mariners to indicate a proposed route used as a supplementary path connecting the Carmel coast and the hinterland."[80]



Fig. 12: *Fan type boat on cliff in open terrain, Nahal Me'arot (photo M. Artzy).*

Nahal Oren

Nahal Oren is a large valley located less than 4 kilometres west of Nahal ha-Me'arot. On the lowest slopes of the Carmal Ridge, on the northern bank of Nahal Oren, there is a carving depicting a boat. The image finds parallels in the carving from Nahal ha- Meárot depicting a prow with an animal or bird.[81] Like the carving at Nahal ha- Mearot, this example also faces the western sea.[82]

78. Wreschner 1971.
79. Wachsmann 2009, 202.
80. Artzy 1997, 8f.
81. Artzy 2003, 241.
82. Artzy 2003, 242.

Bohuslän, The Swedish West Coast

Tanum

The tradition of engraving boats can be traced back to the Mesolithic period. Maritime carvings on blocks are evident in a Norwegian context as early as 8000-4000 BC and are consequently the oldest in the world.[83] Although we have some early examples of this tradition, it does not advance in number until the later periods. Looking at the Nordic status it is clear that Bohuslän, on the Swedish west coast, is the richest rock carving area: 10 000 ship engravings have been located.[84] In a European perspective only the Italian site Valca Monica is comparable in number. This alpine location matches every Nordic figurative carving, with the exception of ship graffiti. The lack of ship representations may naturally question the cosmological meaning of the ship as a global phenomenon, or for that matter, a transformer of knowledge.

The ship, often in combination with other figurative images, is a central motive on the rock panels in Bohuslän. A discussion concerning the maritime significance of the area could therefore be of relevance. A great amount of research has been invested in these depictions, mainly focusing on the symbolism. An alternative approach has been outlined by Johan Ling who studies Bronze Age shore displacement. By examining the shorelines of the Bronze Age in relation to the ship motifs, he has concluded that 65-70% of the carvings in Tanum, Northern Bohuslän, were situated close to the Bronze Age shoreline.[85] Independent of their geographical placement in the landscape, the areas with rock carvings in Bohuslän are the most concentrated in Europe, but furthermore, they are also the areas with the most complex iconography. The carvings on the rocks of Bohuslän are additionally considered to be the most eminent for drawing parallels to iconographic comparisons and the symbology of the Eastern Mediterranean[86] due to the many similar features in the iconography, chronological correspondence, and the interaction and trade of metals [87] – directly or indirectly – between these areas. Due to these factors, maritime engravings from Bohuslän, and the discussions of these engravings, will be adopted in the following discussion as an analytical tool and a door opener to see the ship engravings from the Eastern Mediterranean in another perspective.

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83. Persson 2013, 166.
84. Hygen and Bengtsson1999, 92.
85. Ling 2008, 4.
86. Olsson 1999, 146f.
87. According to Johan Ling (*et al.* 2014), the lead isotopic analyses of metal items from Scandinavian contexts disclose Cyprus as one of the major areas that delivered copper to the Scandinavian area during the Bronze Age.

Mediterranean and Bohuslän

Accessibility to the maritime carvings – global contextual variety

It can therefore be established that the Mediterranean and Scandinavian ship-carvings are depicted in a plethora of contextual environments. In order to highlight the circumstances concerning the location of the Mediterranean carvings it is important to view them in a broad perspective. In this case they will be discussed and compared in relation to the contextual accessibility the Scandinavian carvings seem to have had.

The range of motifs on rock carvings is considerable in Scandinavia, but the most frequent figurative motives are the ship-representations. According to Kristiansen and Larsson, Scandinavian ship-images from the early Nordic Bronze Age correlate in form and construction with the Mediterranean ships. The maritime resemblances suggest that they are the result of direct long distance contact in which the Nordic chiefs were personally involved.[88] Most of the ships have a coastal position that may indicate the emergence of maritime chiefdoms.[89] The ships demonstrate the sea voyagers – the members of the coastal network and, following Kristiansen, "*visiting chiefs would often carve a ship in their local style (which thus became a foreign ship type) to mark their visit, and by marking these "foreign" ship types and their area of origin on a map a network of long distance sea journeys can be reconstructed."* Through an expanding maritime network, a new ideology, cosmology and skilled craft were spread and adopted throughout Southern Scandinavia. The new cosmological approach included the ship as a symbol, as a transmitter and a transformer of knowledge.[90] Consequently, we are talking about a cosmological space or room.

A central question to consider is who had access to the carvings, made by either visiting chiefs or mobile mariners, and the possible intrinsic cosmological space they form a part of? Nordic rock art may be considered to be more profound than, for instance, the Minoan frescos, since the northern images have been cut in the rock in open terrain, and not placed on the interior walls of temples, sanctuaries or palaces,[91] but is it a fact that the Swedish rock art panels were meant to be accessible, or at least visible, for the public? Take for instance the monumental panels in the heritage area at Vitlycke in Bohuslän, or the Himmelstalund in Östergötland. These are places where thousands of people could have viewed the varied nature of the figurative carvings as well as participated in the religious

88. Kristiansen and Larsson 2005, 208.
89. Kristiansen and Larsson 2005, 198; Ling *et al*. 2014.
90. Kristiansen and Larsson 2005, 198f.
91. Kristiansen and Larsson 2005, 335.

performances executed by priests or chieftains. Since many of the images are interpreted as gods, a worship of the deities could also have been accomplished.[92] Although the rock panels seem to be easily assessable in the landscape of today, it is not necessarily the case that members of Bronze Age society were unimpeded or given free access to the cosmological space. Whether the rock panels were exposed in opened or closed areas is not yet certain. There may be evidence of fencing around one of the rock panels in Norway with a line of stones. A large number of sherds have been found between the line and the panel indicating ritual activity inside the "fenced area". This quite unique example indicates that the area might have been closed to the public.[93] In general, further evidence of restrictions in relation to the Nordic carvings, are not established.

Looking at the Mediterranean area, there seems to have been a quite restricted process associated with deities rendered on wall paintings or rock reliefs. Only kings, queens, priests, priestesses, nobles or other elite persons were involved in these ceremonies.[94] Looking at the general picture of the rock art in Bohuslän, most of the panels have:

> "...an open, communicative, coastal location. Moreover, the general, innovative and mobile conduct of the rock art does not agree with the normative ideologies connected with Bronze Age elites (cf. Kristiansen & Larsson 2005). In this respect the rock art panels do not seem to provide the spatial, expressive or social conduct or criteria of control or privacy that chiefly agency demands. They seem to reflect 'public' rather than 'private' or restricted affairs."[95]

Fenced areas for carvings are hardly the general picture in the Nordic area and must be treated as an exception; carvings in general cannot be associated with fencing, on the contrary, many ship representations were easy to detect from the sea and guided the seafarers, mentally and geographically, on their journey.

What about the maritime engravings in the Eastern Mediterranean region; is this genre filled with restrictions when it comes to accessibility? Looking at the examples presented here, the answer is complex. The obvious sacral contexts are evident in the case of Kition as well as in Tel Akko. Yet, Cyprus, as well as the Carmel coast, possesses maritime images that are represented in open air terrain

92. Kristiansen and Larsson 2005, 335.
93. Kristiansen and Larsson 2005, 336.
94. Kristiansen and Larsson 2005, 336.
95. Cornell and Ling 2013, 262.

as well as in households. The notion of Nordic rock-art being more profound, since they are not placed on the interior walls of temples, may thus be valid for many of the maritime images in the Eastern Mediterranean as well. With knowledge of the contextual placement of the maritime images, is it therefore possible to measure accessibility or inaccessibility in temples and the landscape?

In order to highlight this issue, interpretations concerning accessibility and inaccessibility at rock art sites becomes a useful tool. One interpretation is outlined by Richard Bradley who has considered accessibility and inaccessibility at rock art sites in relation to their location and content in a study on British islands.[96] His criteria for accessible sites are defined by their communicative location in the landscape, meaning visible vantage points, trails and paths, but furthermore the complexity of their design and the composition of the carvings. Inaccessible sites are defined on the basis of their inaccessible location in the landscape, close to a settlement and distant from collective communicative spaces, but also by the less complex composition and content of the images.[97] Applying the criteria of Bradley, Johan Ling concludes that in Tanum, Bohuslän, the majority of the sites displaying ship carvings seem to have been located in accessible places in this seascape, but sites with an inaccessible location and content also exist.[98] Ling emphasizes the importance of taking the transformation of the sea level into account, pointing to the fact that the much higher sea level during the Bronze Age connected and united several panels, and consequently, most likely made some panels more accessible. With the sea in mind, Ling develops the criteria of accessible sites being possible to reach from the sea as well as land while at the same time being visible from both the sea and the land. Inaccessible sites "*could then only have been reached, made and perceived from the sea.*"[99] Looking at the slopes and orientation of the carvings, however, only a minority of the panels in Tanum could have functioned as communicative signs over a wide area. To be visible from the sea the carvings must be placed vertically, or at least placed on panels with a 45 degree incline.[100]

Among the open air ship carvings at Carmel ridge, there are examples of images visible from land as well as the sea. In the area of Nahal Mearot, Tell Nami and Nahal Oren the ship carvings are accessible from the sea due to their vertical placement on rocks which have an incline of over 45 degrees. Furthermore, some

96. Bradley 1997, 6.
97. Bradley 1997, 6.
98. Ling 2008, 157.
99. Ling 2008, 157.
100. Ling 2008, 156.

of the ships are rendered on important bench-marks, like that on the exit of the Mearot River.

The shore displacement process, indicating the maritime location of ship-carvings in Tanum, is naturally not an isolated phenomenon for the Scandinavian area, but includes the Mediterranean as well. The now dried-out inlet to the harbour town at Hala Sultan Tekke, as well as the ancient dock in Kition, which is today far away from the coastline, are only two of many examples showing the existence of change in the sea levels during the period between the Bronze Age and present day. An accurate shore displacement process in Cyprus or the Levant Bronze Age landscape is, to my knowledge, not fully accomplished,[101] but it would naturally be highly interesting to discuss these ship-carvings in relation the varied sea levels. Although the curve of the shore displacement process in the Eastern Mediterranean area is therefore excluded in this study, a study of the accessibility of the ship-carvings is still possible through other aspects.

According to Artzy it was probably the mariners who were the artists behind the ships,[102] but it is not their artistry that is of interest here, it is the maritime cult that they practiced. Looking at the contextual placement of the ship graffiti at Hala Sultan Tekke, it is not farfetched to suggest that the rest of the society, or at least the relatives of the mariners, were given access to the maritime images just by being members of the same household. In this case it is perhaps appropriate to consider accessibility as well as inaccessibility since the images were probably seen by people other than mariners, but not by all members of the society. The archaeological record also does not reveal any evidence of a pure maritime cult in the rooms at Hala Sultan Tekke.

The notion of a pure masculine maritime cult can also be questioned. In the case of the temple area at Kition, a female presence can be linked to the maritime structures by the material remains. One ivory plaque, depicting Bes, was located within the area and associated with fertility. Is this an indication that men and women shared the same sanctuary? Were women allowed to participate in cult activities on a general base, or were they given access to the shrine solely because they were linked to a mariner? However possible, this is not necessarily the case. Perhaps the mariners had other concerns or other ways of expressing their concerns here than seen at other sites.

In the case of Tell Akko, area H, it is suggested that the bothros, as well as the adjacent altar, may have been roofed. Was the altar a part of a restricted cultic

101. Holocene sea level changes have been discussed for the Israel coast in Sivan *et al.* 2001, indicating a process of another nature than for Northern Europe.

102. Artzy 2003, 233.

area in which the ship representations were hidden? Was it a restricted area for mariners only or did it include others? Could women be defined as mariners and subsequently included in the maritime sphere?

Including the altar from Akko, the obvious variety in contextual placement and accessibility of the maritime images may consequently be discussed in terms of local tradition. Within each locale a maritime iconography is manifested in different contexts, perhaps due to religious need, navigation, social tradition, professional identity or gender belonging. A blend of these factors in any specific area is naturally not excluded.

Following Michal Artzy "*It should be kept in mind that the mariners who created the carvings of the boats, whether on altars, walls or rocks, might not have been great artists, but very fully cognizant of the shapes of their own vessels and presented them and their most important elements as they intimately knew them.*"[103] The obvious consciousness that the mariners seem to express in the design of the maritime images opens up for the idea of a similar consciousness when it comes to finding a suitable place to carve. The *variety* of find spots of maritime engravings – in public and intimate environments - is obvious. Due to the contextual variety it is not far-fetched to propose that the placement of the engravings depends on multiple variables. Maritime religious practices of a varied nature, along with the visualization of important symbols of connectivity and mobility within the seascape, can be seen as motives for choosing different places for the engravings. It may also be relevant to include the requirement to express the different group identities of people such as chiefs, seafarers, men and women as participants of a society, as the motivation for the maritime carvings contextual variety - perhaps in combination with a time aspect.

103. Artzy 2003, 233.

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Pottery as sign of cultural encounters: The case of Handmade Burnished and Grey Ware in Khania

Madelaine Miller

The Late Bronze Age was a world of interaction in which people and things moved around, particularly in the Eastern Mediterranean basin. As people encountered one another, ideas, thoughts and values were occasionally exchanged followed by cultural changes and the creation of new material expressions.[1] The Minoan harbour town of Khania serves as a good example of cultural encounters at the end of the Aegean Bronze Age. Its location on the northwest coast of Crete was favourable for seagoing travels.[2]A number of objects discovered in the city bear witness to overseas connections with the mainland as well as with Egypt, Italy, Cyprus, and the Levant.[3]

In this article I will explore cultural meetings and external impacts/influences on this harbour city by examining two pottery types which have often been associated with the last and tumultuous phases of the Late Bronze Age and the movements of people of western origin; Handmade Burnished Ware and Grey Ware.[4] I will question how these items were used in their new cultural contexts and whether they were primarily used in everyday household activities, or in what could be identified as non-domestic contexts like ritual ones. Did their presence have any impact on the local pottery production?

After providing a short background including historical and theoretical frameworks for these questions and an introduction to the HMB and GW pottery, this paper will focus on a case study followed by a discussion. Most of the HBW and GW pottery from Khania dates to the LM IIIB: 2 period; I will therefore focus on this phase.[5]

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1. Gosden 2004, 2012, 13.
2. Andreadaki-Vlasaki 2010, 519, points out that as Khania is located opposite the Peloponnese, sailors could only travel from the mainland to Khania by following the currents.
3. Hallager and Hallager 2003; Andreadaki-Vlazaki 2010.
4. Deger-Jalkotzy 2008, 385.
5. Only a few HMBW sherds comes from the previous LM IIIB:1 layer, 26 sherds were found in the LM IIIC. Hallager 2003, 254.

Maritime contacts in the Late Bronze Age

The Eastern Mediterranean experienced a period of intense contact in the Late Bronze Age, largely conducted through maritime enterprises. The capability to construct ships that were capable of open-water voyages as well as the ability to sail them partly explains why seaborne activity increased during this phase.[6] In practice, this meant being able to sail for several days out of sight of land as in the case of the route from Crete to Egypt, a journey that would have lasted about five days. These open sea travels may also have involved sailing at night.[7]

Large quantities of different wares were now circulating in the Mediterranean through far-reaching networks. Long distance commerce included trading of raw materials as well as manufactured objects.[8] Two examples of sea borne trade in the Late Bronze Age are the famous ship wrecks of the Uluburun and the Cape Gelidonya which were discovered off the coast of Turkey. The wrecks date from around 1300 BC and 1200 BC respectively and contain the remains of their cargoes which give a close picture of what was traded at the time. The smaller ship, the Cape Gelidonya, contained mostly bun ingots, bronze tools and copper oxhide ingots – it appears to have been collecting metal junk for reuse. The Uluburun ship contained at least fifteen tons of cargo, the main part of which seems to have been metal including ten tons of raw copper. Other items included ivory and wooden works, personal items, ship equipment, weapons, tools, and jewellery to name but a few. Although much is still uncertain in terms of ports of call, final destinations and the ownership of the boat, there are several indicators which suggest that the ship sailed to the Aegean from the east.[9]

Excavation reports from a large number of sites throughout the Mediterranean record objects that bear witness to these travels and meetings. The Aegean-style frescoes discovered at Tell el-Dab'a (ancient Avaris) in Egypt and the depictions

6. Berg 2007, 403; Casson 1995; Kristiansen 2013; Manning & Huhlin 2005; Mee 2008; Wachsmann 1998. For Minoans in the Central, Eastern and Northern Aegean as well as different aspects like trade, thalassocracy and so forth, see Macdonald, Hallager and Niemeier 2009. See also Mediterranean Crossroads 2007, Antoniadou and Pace (eds.) for different topics related to maritime interaction in the Mediterranean during the Bronze Age with a special focus on movement and change. See Broodbank 2000 for maritime communication in the EBA and Alberti 2013, 22-43, for the MBA. On harbors of the Bronze Age see Oleson and Hohlfelder 2011, 809-812.
7. Berg 2007, 387-415.
8. van Wijngaarden 2012, 61-62. See Leriou 2011, 262-263, on Aegean and Cypriot trade in the Late Bronze Age.
9. Another ship wreck, the so-called Iria wreck discovered in the Gulf of Argos, also dates from the 13th century. Wachsmann 1998; Burns 2010, 291-304; Cline 2014.

in Theban tombs of Cretan envoys carrying merchandise are examples of close contact between Crete and the Eastern Mediterranean.[10] Knowledge about how trade was organised is still limited, particularly concerning private tradesmen versus state organised trade, although scholars generally agree that there was low volume trading of luxury goods which moved between elites as well as larger scale bulk trade directed at "larger communities". Objects that do not fit in either of these categories might indicate, as suggested by Steel, that sailors procured personal items on their voyages.[11]

One of the major changes regarding Aegean trade appears to have started in the LM IIIA period when trade with Italy, Sardinia and Sicily increased. According to Betancourt, discoveries of the Aegean weight system on these sites indicates the importance of trade between the regions.[12] Pottery from Crete and from the Peloponnese has been found at the subsequent LM IIIB period sites in Northern Calabria and on Sardinia.[13] According to Watrous this development was related to the on-going insecure political situation in the Eastern Mediterranean which saw the Hittite kingdom and Egypt fighting over the Levant and culminating in the battle of Quadesh *c*. 1275 BC.[14]

Perhaps most significantly, the end of the Late Bronze Age is characterized by a great instability which included the movements of different groups of people, most

10. Beside the Aegean style frescoes in Egypt, discoveries of frescoes have been made at sites in the Near East at the palace of Tell Kabri, Quatna and at Alalakh; Chapin 2010, 229; Bietak 1995, 49-89; Wachsmann 2011, 202-204.
11. In contrast to the Aegean, Cyprus and the Southern Levant, textual documents from Syria and Mesopotamia show that an intricate trading system existed in which both private traders as well as the state were involved during the 2nd millennium, Steel 2012, 122, 138-142. For an overview on LBA trade see Steel 2012. From the so-called Amarna Letters found in Egypt, dating to the reign of Amenhotep III and Akhenaten it appears that Egyptian traders were much more limited compared to the tradesmen in the Near East, and that the Pharaohs had control over trade to a greater extent, Mee 2008, 378-379.
12. Betancourt 2008, 222. The major part of the Aegean style pottery discovered in Italy was locally made, Mee 2008; 380. See Hallager 1985a on the relations between Crete and Italy in the LBA.
13. Betancourt 2008, 222; Mee 2008, 380; Watrous 1992, 182-183. Metal artefacts from Italy have been found in Crete, although most of these appear to have come from the central part of the island. The earliest finds, daggers and fibulae, date to the 13th century, Hallager 1985, 296.
14. Watrous 1992, 182-183. Mee 2008, 377, nevertheless states that trade continued to thrive for a while.

often referred to as the "Sea Peoples", around the coasts of the Mediterranean.[15] Little evidence of habitation exists on Crete from the LM IIIB2 period in some of the large coastal settlements. Several sites were already established that would subsequently be used as "refuge" locations in the following LM IIIC period.[16] As for the mainland, this marks the end of the Mycenaean palatial period when the palace system, including the palaces, were destroyed.[17]

Intercultural contacts and its material expression

The use of pottery as a point of departure for examining cultural encounters in Khania will be based on the discussion of materiality which has taken place in recent years. Material culture is no longer understood as a collection of lifeless objects, their active role in people's lives is instead acknowledged. As objects have their own agency that can affect the construction of the social world as well as interfaces between people to differing degrees. Yet, the relationship between people and things is all but simple and straightforward, and as objects can move around during their lifecycle they can also change and/or be given additional meanings depending on the context.[18]

The harbour town Khania appears to have functioned as a node of long-distance trade during the Late Bronze Age, as such it worked as a mediator for encounters. People from various social and ethnic backgrounds would have met each other here; sailors, merchants, and artisans as well as curious locals in circumstances that most likely involved constant mediation between different groups regarding identity, ideas and values.[19] The outcome of these intercultural meetings may have had an effect on the economy but also on socio-political and cultural life. This could have involved functional innovations and technologies such as new architectural features, improvements in ship construction or different pottery

15. The so-called Sea Peoples consisted of several ethnic groups of which some appear to have been seaborne. Ramses III claimed that he had managed to hold them back in two major battles that were later depicted on the walls of his grave temple at Medinet Habu, near modern Luxor. Wachsmann 1998, 163; Deger-Jalkotzy 2008, 387-415; Leriou 2011, 251-253. See Artzy 1997, 1-16, for further discussion. See also Dickinson 2010, 483-490, for a general discussion on the Late Bronze Age collapse. See Cline 2014 for a thorough discussion on the theme.
16. Several sites that were to be used as "refuge" locations in the following LM IIIC period were already established. Hallager 2010, 157.
17. Deger-Jalkotzy 2008, 387.
18. Meskell 2005; Maran and Stockhammer 2012; Steel 2012.
19. Hallager and McGeorge 1992; Maran 2012, 121; Panagiotopoulos 2012, 54. See also Falck 2003, for discussions on harbours and hybridity.

shapes as well as the exchange of ideas, beliefs and knowledge that may well have led to the amalgamation of new and traditional social practices. However, as Maran points out, even though port-cities could serve as melting pots for people of different origins, both of local and non-local, there is the danger of interpreting harbour towns too simplistically and giving the so-called "foreigners" too much credit by not acknowledging the heterogeneity that exists in societies in general. Moreover, the degree to which certain aspects were taken on board could vary between various groups for a number of reasons. There would certainly have been a difference between those coming to a new place for the first time and the non-locals who had lived there for a while. There could be countless reactions to an unfamiliar culture, some individuals and/or groups might have been more prone to assimilate new material culture, ideas and values, whether they belonged to the foreigners or indigenous peoples.[20] Either way, meetings would have had an effect on people some way or other, irrespective of reactions.[21]

How these processes could have worked and in what different ways they could have been reflected in the material world has gained attention among scholars over the last decade.[22] Societies in which intense cultural contact was conducted, like harbour towns, should be understood as "dynamic" and changeable but also as heterogenic [23] with the birth of new material expressions.[24]

A number of factors like personal preferences and local traditions are involved and come into play when considering how and why people assimilate aspects of a new culture. By looking at objects as types of a material connected with various social meaning that, besides the practical, can be used to reinforce identities and/or be used for symbolic reasons, we may understand these changes and how they operated. The meaning of the objects is linked to social relationships and practices as we use them to express identity, materialize symbolic values and build relationships. Objects can also form the conduct of people collectively. Through the material world people can express their place in the social world and objects can therefore act as an intermediate. In other words, things, as well as people, have agency.[25]

With regard to prehistoric societies, like the Minoan, we know that some parts had direct or indirect contact with the world outside Crete. Why certain objects and ideas seem to have been accepted is interesting. As pointed out by Philips,

20. Maran 2012, 121.
21. Steel 2012.
22. Gosden 2004; Steel 2012; Maran and Stockhammer 2012.
23. Maran and Stockhammer 2012. For examples in the Argolid in the 13th and 12th century BC, see Maran 2004, 11-30.
24. Hodder 2012; Jung 2012; Knapp 2012.
25. Steel 2012, 6-7; van Winjgaarden 2012, 61; see also Meskell 2005.

"the recipient culture must have been exposed to far more potential influences than it actually embraced".[26] Moreover, influences and transformations did not involve the whole society simultaneously, but instead operated in various ways and at various levels and varied over time and according to context. There were probably a number of reasons why some objects were integrated and some were not.[27] The same type of object might have had a variety of meanings depending on the recipient and therefore may have departed from its original meaning. The intrinsic value, moreover, could have been lost on the way or for some reason rejected. Misunderstandings of the original significance may have taken place, or, it may well be that the receiver was aware of the original meaning but nevertheless chose to accept only those aspects that were of interest. The choice and liking of the individual must also be taken into consideration – not all foreign features were adopted or even open for adoption by everyone: local tradition as well as the intrinsic conservatism of people could at times have been too strong. Just as people are selective today, people in ancient times probably were too, and the remains we find may be the results of individual preferences in at least some of the instances.[28]

Handmade Burnished Ware and Grey Ware

The so-called Handmade Burnished Ware (HMBW), sometimes also referred to as Barbarian Ware, appears in the Eastern Mediterranean in the 13th - 12th centuries BC, particularly in the Aegean area.[29] The earliest occurrence in the Aegean is at Khania and Tiryns and dates to the 13th century BC. Thus the introduction of the ware in the LM/H IIIB:2 is limited to Western Crete and the Argolid.[30] In the following LH IIIC period the amount of handmade pottery increases, and it is found in almost all early LH IIIC settlements on the Greek mainland, at several sites in Crete, in Cyprus as well on the Anatolian and Levantine coasts. At the same time, the number of HMBW at Khania is reduced. Several areas have been put forward as the provenance of the pottery; the Northern Balkans, Northwest Greece, Southeast Europe and both sides of the Adriatic Sea. Whether the makers of this pottery had something to do with the demise of the Mycenaean palaces has also

26. Philips 2005, 39.
27. Clarke 2005, 137-139. For a discussion on the impact of trade on Late Cypriote society see Antoniadou 2005, 66-77.
28. Philips 2005, 39-45.
29. French 1998,39-51; Lis 2009, Iacono 2013, 60-79.
30. Deger-Jalkotzy 2008, 395; Iacono 2013, 63; Rutter 2012, 82. According to Iacono 2013, 63, however, one sherd has been found in Nichoria and one vessel in Athens from the LM IIIB:2 period.

been a matter of discussion. Other finds that originated in the west (Italy, the north-western Balkan and Central Europe) and appear in the Aegean in the postpalatial period are the flange-hilted sword of the Naue II type, and the violin-bow-shaped fibula.[31] The Naue II sword became the standard in the Mediterranean at the end of the Bronze Age. Due to their western origin, in combination with the appearance in postpalatial contexts, scholars have dedicated much attention to these finds.[32]

Although the hand-made pottery has gained a high degree of attention, the actual amount retrieved from each site is generally low. Usually it does not surpass 1% of the total amount of sherds found in the settlements.[33] Given the fact that it most likely did not meet the demands of an Aegean population who were used to Minoan and Mycenaean pottery it has often come to be associated with foreigners.[34] The pottery comes in a variety of shapes including cooking pots, bowls, cups and jars. Open shapes are the most common types in Khania and Lefkandi whereas closed vessels for cooking and storage, are found alongside open vessels, like carinated cups, in the rest of the Aegean. The pottery is usually burnished and most often of poor craftsmanship. Typical for the ware is its "momentary character", and that when it lasted for a longer period, the quantity quickly drops off.[35] According to Jung, the HMBW is of South Italian Recent Bronze Age type, and features typological similarities between the handmade so-called *impasto* pottery.[36] Nevertheless, even if an Italian origin is plausible for the HMBW, most pottery of this type is locally made at the sites where it has been found.[37]

Another ware with affinities to pottery from the south of Italy is Grey Ware, a pottery type that is often found together with Handmade Burnished Ware. The former is, however, found in much smaller numbers than the latter.[38] Grey Ware appears to have been rather uncommon in Italy as a type of a handmade pottery. According to Hallager, Grey Ware is restricted to Lipari and the Gulf of Taranto. It was discovered together with Minoan and Mycenaean sherds at Broglio di Trebisacce.[39]

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31. Deger-Jalkotzy 2008, 389, 395.
32. Iacono 2013, 61-62.
33. There are a few sites at which the sherds exceed 1 %, such as Troy and Mitrou which instead have 2,5 % handmade pottery, Lis 2009, 152-153. There are three distinctive groups of handmade pottery according to Lis; Handmade Burnished Ware, West Anatolian Handmade Pottery and Handmade Domestic pottery.
34. Hallager, 1985a, 304; Deger-Jalkotzy 2008, 395.
35. Lis 2009, 152.
36. Jung 2012, 109.
37. Lis 2009, 154.
38. Jung 2012, 109.
39. Hallager 1985, 303.

The settlement of Khania in the Late Bronze Age

As initially mentioned, the settlement of Khania-*Kydonia* lies on the northwest coast of Crete. On the Kastelli hill, east of the Old Harbour, excavations have revealed an area of 550m^2 in which five buildings, parts of two streets and an open area have been discovered. Amongst the particularly interesting finds is the unique Master Impression, discovered during excavations in 1985 in a pit in Building 1.[40] Other finds of importance include the Linear B tablets, found in a LM IIIB context. On one of these tablets the handwriting closely resembles that of "scribe 115" from Knossos, which is very interesting since it could suggest that the same scribe might have worked at both Khania and Knossos.[41]

Khania was occupied throughout the Bronze Age. A number of conspicuous features in the architecture are dated to the Neopalatial period such as ashlar facades, fresco paintings, columns, pillars, pier-and-door partitions which were found in what at first appeared to be private buildings attributed to the elite. More finds of this character, together with discoveries of cult and ceremonial places have caused the excavators to suggest that some of the extensive building complex in the settlement could in fact have been part of a palace structure.[42]

In the LM II-IIIA2 period Khania probably functioned as one of the so-called "second-order centres" on the island where a local elite known as "Collectors" administered herds of sheep for the palace at Knossos. The centralized administration at Knossos at this time used the Linear B script written on clay tablets, thousands of which have been discovered in the Knossos palace as records. These tablets tell us about an economy where sheep breeding and textile production seem to have been the main concern. *Kydonia* (*ku-do-ni-ja*), i.e. Minoan Khania, was probably one of these six centres mentioned in the texts. It is interesting that Khania seems to have benefitted from a fairly high degree of independence in relation to the Knossian administration.[43]

In the LM IIIB period, Khania had grown into a maritime centre with an extensive overseas trading network reflected in the ceramic goods which were imported and exported.[44] The town, which reached its highest level of urban development at this time and became one of the most important centres on the island, was characterized by large-scale architectural structures and elite tomb

40. Hallager 1985b; Andreadaki-Vlasaki 2002.
41. Hallager, Vlasaki, and Hallager, 1992; Hallager and Vlasaki 1997.
42. Andreadaki-Vlasaki 2010; Hallager 2010,151-153.
43. Preston 2008, 313-314. For a general overview of the LM II-IIIA see Hallager 2010, 153-155. For further discussion on how the administration was managed in the Mycenaean Late Bronze Age, see Shelmerdine and Bennet 2008, 289-309.
44. Preston 2008, 318.

constructions.[45] This development is interesting since the island in general experienced a declining climate with a decreasing level of trade with the Eastern Mediterranean, a change most likely connected to the growth of Mycenaean contact with the Levant and Egypt.[46] The local fine ware production from the "Kydonian" workshop was exported to other sites on the island as well as to the Greek mainland, Cyprus, the Cyclades, Italy and Sardinia.[47] Finds of Handmade Burnished Ware in the settlement indicate additional connections with the latter areas. Relations with the Greek mainland, in particular the Argolid and Boeotia, seem to have been especially close at this time and there are several indications of a Mycenaean presence in the LM IIIB period according to the excavators.[48] The Linear B tablets, as mentioned above, were discovered in Building 1. Circular hearths with strong parallels to the mainland counterpart were found in the same building along with six figurines. At least five of the figurines were imports from the mainland or made in the Mycenaean style. The excavators believe that this, together with the placement of them i.e. close to a door or to a hearth, strongly speaks for a Mycenaean presence in the building.[49] According to Andreadaki-Vlasaki[50] the evidence given by the archaeological material, together with the skeletal remains, appears to imply a mixture of a native and non-native population co-existing in the city.

Khania was characterized by decline in terms of outside contact in the LM IIIC period. There is no evidence of an administration or that large buildings would have been in use. Sometime during this phase the town was abandoned like many other coastal sites on the island. However, there are no signs of destruction and many of the rooms were found empty.[51]

45. Andreadaki-Vlasaki 2010, 518-528.
46. Wallace 2010.
47. Hallager and Hallager 2003.
48. Hallager and Hallager 2003; Andreadaki-Vlasaki 2010.
49. Hallager 2003, 191, 287.
50. Andreadaki-Vlasaki 2010, 524-525. The settlement of Khania covers the whole of the Bronze Age, however, the discovered tombs date mostly to the LM IIIA and B periods. See also Hallager and McGeorge 1992 for the examination of the LM III burials in Khania.
51. Hallager and Hallager 2003. From this period, threats have been detected towards coastal settlements, many of which were trading centres. As a result, villagers abandoned their homes and moved further inland to the hilly or mountainous regions, where defence was easier. In this turbulent phase at least 109 new settlements were established in the remote uplands (McEnroe 2010).

The context of Handmade Burnished Ware and Grey Ware in Khania

Let us now take a look at the LM IIIB:2 settlement in the Agia Aikaterini Square. After its destruction by fire in LM IIIB:1, the settlement was rebuilt in LM IIIB:2. The rebuilding seems to have started immediately although only parts of the settlement were rebuilt while others were left in ruins. The site, which was extended towards the north and northwest, consisted of two or three buildings. Some of the rooms were abandoned while the so-called Rubbish Area North was extended. Overall, small modifications were made in the architecture.[52] From the remains of the building, together with the large amount of pottery (nearly two and a half tons) and small finds, the excavators came to the conclusion that the settlement consisted of large and roomy buildings. The one-storey Building 1 measured at least 150m^2 with three larger rooms enclosed by smaller ones and a courtyard. Large-scale storage and/or handicraft in the settlement seems to have taken place outside the buildings, as shown by the finds of leather and woodworking. Traces of the metal industry were found in Courtyard A. Basketry as well as carpentry may also have been present. The buildings were more or less entirely constructed of stone and the interiors had walls coated with clay lining and plaster. Cooking activities only seem to have taken place in Room E where complete cooking vessels were discovered. The fact that there was only one place for cooking supports the possibility suggested by the excavators that Building 1 functioned as a single unit.[53] Various activities could have taken place in the courtyard. There is little evidence, in contrast to the following LM IIIC period, for textile production or that any kind of handicraft was conducted inside the buildings. The chief industry in the settlement seems to have been the production of the Local Kydonian pottery. Besides the large amount of misfired Kydonian Ware fragments, a potter's wheel and two fragmentary examples together with a potter's rubbing tool denote the significance of the production. The Local Kydonian ware was exported to sites all over Crete, the mainland, the Cyclades, Cyprus and Sardinia.[54]

There is little evidence from the LM IIIB:2 period of a functioning administration. The worn fragment of a Linear B tablet (KH X 3) probably belonged to an earlier phase. However, the excavators point out that there is clear evidence that the script was still in use as the many Linear B inscriptions have been found on fragments of stirrups jars from securely dated LM IIIB:2 strata.[55]

52. Hallager and Hallager 2003, 22, 286.
53. In the following LM IIIC period, fire areas and "cooking facilities" were abundant. Hallager and Hallager 2003, 286.
54. Hallager and Hallager 2003.
55. Hallager and Hallager 2003, 286-288.

Handmare Burnished Ware and Grey Ware in Khania

Ninety fragments of HMBW were found in the Agia Aikaterini Square in Khania. The fabric of these fragments is dark brown or reddish brown with a thick black core. The pottery is often fired greyish-black "to black all through". There are traces of burnishing tools on the surface. The fragments all come from open vessels of the *olla*, *scodella a*nd *ciotola careneta* type. There are three varieties of the *olla* type deep bowl for which clear parallels can be found in Southern Italy; two types with horizontal handles and one handle-less hole-mouthed type. The *olla* appears to have had no impact on local production. The carinated one-handled cup *ciotola careneta*, sometimes equipped with elaborated handles, was perhaps the most typical vessel of the sub-Appenine Late Bronze Age. This drinking cup, on the other hand, inspired similar looking wheelmade cups with high handles and linear decoration: so-called banded cups. The shallow convex cup, named *scodella*, which also has parallels in South Italy, is rare.[56]

The main part of the Handmade Burnished Ware in Khania dates to the LM IIIB2 period. The fragments were discovered in three areas: six fragments come from Rooms E and A and Space D. Six fragments were found in the Courtyard area or the southeast area. Most of the fragments, 78 sherds, were found in the so-called Rubbish Area North, which will be discussed in detail later. Chemical analysis showed that the pottery was made locally [57]

Regarding Grey Ware, the 75 fragments found in the Agia Aikaterini Square belong to open vessels that are thin-walled and wheel-made. The surface is burnished and the clay dark grey. Four sherds were found in Room A, the Courtyard Area and Space A-D. The greater part, 78 fragments, came from the Rubbish Area North. The fragments all date to the LM IIIB:2, i.e. the same strata as the sherds of the HMBW type. As for the shapes, one fragment, a spout, comes from an unusual spouted cup. The fragment found in Space A-D, from another type of cup, is unusual according to Hallagers. The two sherds from the Courtyard Area belong to a carinated cup and a kylix. Only a few shapes were found in the Rubbish Area North: kylikes and two types of small cups of which the carinated cup is the most common. The Grey Ware shapes from Khania have no close counterparts in Crete, although parallels with these are found on the mainland and most of all in Italy.[58] B. Hallager points out that there are wheelmade Minoan /Mycenaean kylikes made in the Grey Ware

56. Rutter 2012, 83-84. For a full description of the *olla* types see further Hallager and Hallager 2003, 253.

57. Hallager and Hallager 2003, 253.

58. Hallager and Hallager 2003, 255-256.

style in Khania. She believes that these were made by Italians who had learnt about the potter's wheel and for some reason wanted to produce a mix of their own and local Minoan traditions. It could therefore have been produced for a specific market.[59]

Rubbish Area North

It is time to take a look at the context of the HMBW and Grey Ware in Khania. As mentioned above, the main part of the HMBW and Grey Ware fragments were found in the Rubbish Area North (RAN) outside Buildings 1 and 2. This was the largest open area measuring about 150m^2 and consisted of dumps and pits of various sizes dug down to earlier Middle Minoan layers.[60] No architectural remains were discovered here.[61]The pits and dumps were dug at several levels and contained a number of different finds. Almost 1 ton of pottery representing 33% of the total amount of pottery retrieved from the LM IIIB:2-IIIC period was discovered in this area. 859 fragments of pottery were noted from the LM IIIB:2 period. Hallager points out that practically all known types were represented among these sherds, however, some shapes appeared in larger numbers; pithoi, bowls, kylikes and cups. Among the closed vessels, the stirrup jar was the only shape that was discovered in "some amounts". The number of small decorated stirrup jars were represented by an almost double quantity in comparison with the remaining deposits from the LM III:2 period. With regards to the non-local type of pottery, 91 % of the HMBW and Grey Ware were discovered in the RAN. Imports from Knossos constituted 38%, however, the Mycenaean ware was "only" represented by 13%.[62]

Besides pottery, pieces of obsidian were also discovered, although in small amounts as was the case for raw materials in general. Bronzes and stone tools were found in larger numbers. Small pieces of both painted and unpainted plaster fragments were also noted. Many of the small finds were all found well preserved; a fibula, an arrowhead and bronze fishing hooks as well as bone and bronze needles. Moreover, four completely preserved loom weights were also found along with *Murex* shells.[63]

59. Hallager 1985a, 303.
60. This area was also in use in the following LM IIIC period. Hallager 2001, 175-179.
61. Hallager and Hallager 2003, 128.
62. Hallager 2001, 175-180; Hallager and Hallager 2003, 132, 140-141.
63. Hallager 2001, 175-180.

In the so-called Central Dump in the RAN an important find of a large, possibly female figure was found (80-TC 023). According to Winbladh the terracotta was locally made in the Local Kydonian Workshop and of very high quality. The upper part of the figure's head appears to have been hand-made whereas the lower part was wheel-made. The height of the head is 0.107, and if it had been complete Winbladh estimates that its probable height would have been 0.15 or 0.16. Compared to other Minoan and Mycenaean figures the head usually constitutes one fifth or one sixth of the whole figure. This would mean, she concludes, that the total height of the Kydonian figure would most likely have been at least 0.75 m.[64] In addition there were fragments of figurines discovered in the RAN. Among these there was a figurine of possible PsiB type that had been locally made (73-TC 016),[65] and an animal figurine that had been imported from Mycenae.[66]

Four fragments of a *rython* in the shape of a goat or a ram (*ovicaprid*) represent a unique find. The *rython* was made in the local Kydonian Workshop.[67] This could, according to Hallager, have been part of cult equipment.

Overall, finds that could also be identified as cult equipment included strainers, rhyta, figurines, stands and trick vases and were numerous in the RAN area. If they had been used as religious paraphernalia, they were most likely the "remains from offerings" conducted in the area.[68] These objects, together with the fact that the pits and dumps in the RAN also contained animal bones, may indicate that there had been rituals in a close by sanctuary. This representation diverged from the average distribution in Khania.[69] The caprids were represented by 48 % in the RAN compared to 62 % in the rest of the settlement, while deer constituted 13 % compared with 3 % in the settlement. Deer constituted as much as 28 % in one of the pits. Another small pit contained 43% from young caprids, which is exceptional and made Hallager speculate as to whether this could have been the remains of offerings. Pigs and cattle were found in the same quantity as elsewhere in Khania.[70]

The large number of finds that were discovered in the RAN area constituted about one-third of the total amount of material from the LM IIIB2 deposits, but differed compared to the remaining finds from the settlement. At first it

64. Winbladh 2003, 270; Hallager and Hallager 2003,166-167; Driessen 2008, 200.
65. Hallager and Hallager 2003, 172.
66. Winbladh 2003: 270.
67. Hallager, 2001b, 315-319.
68. Hallager and Hallager 200, 287.
69. The distribution of animals in LM II and III Khania is in accordance with many other settlements in the Bronze Age. Hallager 2001a, 176.
70. Hallager 2001a, 176; Hallager and Hallager 2003, 137, 141, 145-146, 160, 167, 170, 174, 178.

was interpreted as a rubbish dump, but both the size and the contents made the excavators discuss the possibility that the area could instead have been a waste site for a sanctuary located nearby. Finds that are normally connected with cult contexts – such as figurines, both complete and fragmentary, strainers, stands and *rhyta*– were discovered here. The unusual number of deer found in the pits is also intriguing: they might have been used as sacrificial offerings.[71] In addition, 90% of the HMBW and Grey Ware pottery from Khania was discovered here which poses the question of the significance and use of this pottery.

Discussion

If we examine the degree of influence that HMBW and Grey Ware pottery had on the local pottery production in Khania, it is interesting to note that the open vessel of the type called *olla*, which is the larger of the two principal forms, appears to have had no influence on the native production; a fact already pointed out by Rutter.[72] On the other hand, the drinking cup, *ciotola carenata,* seems to have been the inspiration for the rather similar looking wheel-made high-handled cup, the so-called banded cup, painted with linear decoration.[73] Grey Ware inspired the creation of wheelmade Minoan/Myceanean kylikes in the Grey Ware style. Generally, it appears that drinking wares are more apt to be duplicated/ produced in a foreign milieu than storage and transport vessels.[74] The jars and bowls of Sardinian origin discovered in the 13th century Kommos, for example, appear to have had very little impact or none at all on the local ceramic production.[75] As initially mentioned, Watrous has suggested the reason why the Aegean became involved in Western Mediterranean trading routes in the LM IIIA:2 period could have been because of the need for metals, as the resources in the east were reduced. He has further pointed to the possibility that the HMBW jars found in Kommos might have been used as containers for bronze scrap from Sardinia. Confirmation can be seen in the fact that similar jars found in Sardinia seem to have functioned as containers for this purpose.[76] Hallager has also argued that trade with the west could have been driven by the need for metal as Italy, particularly Sardinia, was rich in copper.[77]

71. Hallager 2001, 175-180; Hallager and Hallager 2003, 128, 286-287.
72. Rutter 2012.
73. Rutter 2012, 84.
74. Rutter 2012, 83-85.
75. Watrous 1992.
76. Watrous 1992.
77. Hallager 1985a, 304.

Iacono followed this line and proposed that the HMBW trade was associated with the trade of bronze objects of the so-called the Urnfield type.[78] This is a group of various bronze items of western origin that usually go under the name of Urnfield bronzes: spearheads, swords, fibulae and pins.[79] According to Iacono, the HMBW pottery did not have a high status in itself and it was instead the connection with the metal that made it exotic. The increase of HMBW in the LH IIIC period would therefore have been a "side effect" of the Urnfield bronzes becoming popular. His suggestion that this west-oriented trade allowed individuals of non-elite rank to work with metal trade on a smaller scale is, I think, highly possible due to the socio-political situation at the end of the Bronze Age. This would then have included the exchange of finished products or metal scraps, as appears to have been the case with the Cape Gelinonya ship. Although interesting, his discussion mainly centres on the LH IIIC period i.e. when the HMBW had almost disappeared at Khania. Nevertheless, we know that Khania evolved in the LM IIIA:2-IIIB:2 periods into a maritime node with extensive overseas contacts including Italy. Could the presence of pottery of an Italian type be the result of small-scale trade activity? In comparison with other sites in Crete that appear to have declined during this period, Khania prospered[80] and had acquired a position that might have been favourable for different groups to conduct maritime activity. It appears to have consisted of parallel systems that involved both major operations, small-scale enterprises and individual efforts.[81]

It has already been suggested by Hallager that the HMBW and GW in Khania could have belonged to a group of foreigners of Italian origin.[82] This is in accordance with the common opinion at the moment, i.e. that HMBW was most likely made by immigrants (when found in the Aegaean)[83] but that these groups were either large or dominant.[84] But can a foreign type of pottery be taken as evidence for the presence of non-local people? Is it reasonable to assume that this pottery, only 1% of the total amount retrieved, was associated with a new group of people living here? Anthropological studies indicate that practices connected to household activities like eating and drinking can be sustained in a new foreign context for "some time". Food, and all the activities that are linked to it like cultivation, preparation and consumption, can be used

78. Icano 2013, 66.
79. Sherrat 2012, 16.
80. Preston 2008, 318.
81. Manning and Huhlin 2005, 273 see also Petrarkis 2011, 214.
82. Hallager 1985a, 293-305.
83. Deger-Jalkotzy 2008, 395.
84. Lis 2009, 155; Rutter 2012, 83-84.

as markers of group identity.[85] But at the same time this need not be the case, and it is problematic to link an ethnic group identity with material culture.[86]

Could the presence of HMBW as well as GW in Khania instead be an indication that some of the locals in the town had adopted new ideas? It must be taken into consideration that parts of the population, living in Khania for generations, were involved in maritime activities and that this naturally affected them in various ways. As pointed out by Artzy[87], people living in port cities might have dedicated themselves to maritime trade activities which meant spending several months of the year at sea. A practice that would, on a regular basis, have entailed contact with different foreign milieus and exposure to new objects and traditions. On their return home, these sailors and/or tradesmen might then have introduced non-local objects and customs, perhaps initially only to their nearest kin, but at a later stage they could have spread further into society. Most likely a variety of goods were transmitted to different target groups, luxury goods, for example, which were probably not available to non-elite groups. Raw material would have been passed on to craftspeople whereas essential wares would have been intended for farmers and non-elite groups living in the city. It is highly possible that those engaged in different types of maritime activity also functioned as the transmitters of new ideas and objects in coastal communities.[88] The locally produced HMBW and GW pottery might perhaps have been the result of such an introduction.

Hallager has shown that from the LBA I/II period there was already evidence of Minoan pottery in Italy (Lipari and Vivara).[89] Minoan pottery is also found at Broglio di Trebisacce, Scolgio del Tonno and Thapsos in the following periods. It appears that contact between these sites and Crete was more or less constant and was not limited to one region. In the LM IIIB and C periods, sites like Termitio in the south of Italy and Sardinia appear to have been new trading places. Moreover, pottery from the Kydonian workshop has also been identified in Sardinia, at Orosei and at Antigori. Whether the HMBW and Grey Ware in Khania had been brought in by a small group of Italians, was the outcome of intermarriage, or the result of sailors/tradesmen from Khania bringing home new ideas of pottery is perhaps of less importance since what it does signify is that individuals from both areas interacted with each other and had done so for

85. Lucy 2005, 105.
86. Jung 2012, 117.
87. Artzy, 1997.
88. Knapp 2005, 10.
89. Hallager 1985a, 293-305.

many generations. The creation of a new drinking cup, inspired by the Italian style indicates that the encounters had a wider significance.[90]

Here I believe that the context is important. The RAN where 90 % of the HMBW and Grey Ware pottery was discovered could, according to Hallager[91], have functioned as a waste deposit for a sanctuary nearby due to the character of the finds. It is highly interesting that the largest amount of HMBW and Grey Ware from the settlements was deposited in pits in this area. However, were these depositions "only" waste from a possible sanctuary nearby? The practice of using pits or holes has a long tradition in the human history. The usage of pits and holes for ceremonial purposes, often with deliberately destroyed items, can be traced back to the Neolithic period in Crete.[92] Could the remains in the pits and dumps be deliberate depositions that were made after ceremonial or ritual gatherings? Dietler defines ritual feasts as "forms of public ritual activity centered around the communal consumption of food and drink".[93] He further argues that feasts are not only intrinsically political but also work as an essential tool in political interactions, although he makes it clear that they are not just instruments of power or that they functioned solely as an arena for actions with political connotations. The focal point is eating and drinking in a communal setting. Even if a feast is defined as a ritual activity, this does not signify "highly elaborate ceremonies", nor do these gatherings need to be "sacred". What is significant is merely that they are emblematically different from every day activities. By drawing on examples from Africa, Dietler further points out that feasts could serve multifarious functions in societies with regard to social relations. They may serve as an important intersectional context where associations between individuals and groups from various levels of society meet in order to sustain social control. Both rituals and religious activities can be seen as an important seam in the community that bound people together and as a medium through which cultural identity and social strategies could be conveyed.[94]

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90. Why the GW pottery was no longer being produced in the following LM IIIC period and why the HMBW almost disappeared in Khania is interesting given the fact that there was an increase of HBW elsewhere in the Aegean following this period (LH IIIC early). Perhaps it was connected to the ongoing insecure situation on the island when several of the coastal communities, in particular those involved in trade, were abandoned due to external threats. McEnroe 2010.
91. Hallager, 2001.
92. Driessen, Farnoux and Langohr 2008, 197-205.
93. Dietler 2001, 67.
94. Adams 2004, 30; Dietler 2001, 65-74; see also Borgna 2012, 135. The practice of consuming wine appears to have had a long tradition in Minoan Crete. On Aegean feasting activities see Borgna 2004, 247-279; 2012, 137-151.

Conclusion

The HMBW and GW pottery and its role in Khania have been at focus of this article. The relevance of the investigation lies in the fact that this pottery has often been associated with the movements of people from west to east at the end of Late Bronze Age, and interpreted by many scholars as an indication of a foreign, albeit small, group of people. No clear-cut answers have been provided, instead I hope that by looking at the pottery from the viewpoint of materiality and cultural encounters, the complexity of intercultural interactions and its material expressions have been demonstrated.

In comparison with the remaining assemblages of pottery from Khania, a few sherds of HMBW and GW pottery have been discovered. On the basis of this small sample it is problematic to draw any conclusions as to whether a foreign group of Italians lived here or not. One would perhaps expect to find more household pottery and an overall stronger impact on the local pottery. But, on the other hand, if we consider the fact that ongoing contact between Khania and Italy had been taking place since the LBA I/II it is not unlikely that by now, in the LM IIIB2 period, some people from Italy were well integrated into the society. That the Italian ware was locally made indicates this. But the fact that the pottery was locally made raises the question of *how* it was viewed during the LM IIIB2 period? Perhaps it was not regarded as foreign anymore.

As initially suggested, the context can help us understand how the pottery was used. The HMBW and GW pottery was almost exclusively discovered in the RAN area and did not spread in the settlement. Due to the interpretation of the RAN (see above) the pottery appears not to have been used in everyday household activities. This may signify that it was important enough to be selected and used in a context where different social interactions took place that could have involved food and beverages. As a maritime hub in the LM IIIB:2 period, at least parts of Khania's population would have been engaged in different types of seafaring activities that involved far-reaching contacts in the Mediterranean. This was an environment where connectivity by sea was essential. Meetings with new cultures probably took place on a regular basis. This connectivity also meant that sailors and merchants from other cultures from time to time stayed for longer or shorter periods in the town. In an environment of this kind, negotiation for different social positions and the creation of new relations between various individuals and/or groups must have been constant, but also one in which new hybrids were created as well as new material expressions. The consumption of food and beverages in a setting like this could have worked as an important platform for social encounters providing individuals and groups with the opportunity to express their identity and perhaps to form new alliances. It is in this setting of cultural intermingling that the new drinking cup, inspired

by the *ciotola carenata,* was created as well as the Minoan/Mycenaean kylikes in the Grey Ware style.

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Communication and Trade at Tegea in the Bronze Age

Hege Agathe Bakke-Alisøy

Communication is a central part of any discussion of the Aegean Bronze Age and the development of the Minoan and Mycenaean civilisations. Movement and communication is always present in human society. The archaeological material from the Tegean Mountain plain indicates the importance of inland communication on the Peloponnese during the Bronze Age. I here look at the settlement structure at the Tegean plain in the Bronze Age, and its relation to possible routes of communication and trade. By discussing changes in settlement pattern, land use, and sacred space my aim is to trace possible changes in the local and regional communication networks in this area. During the EH communication and trade networks at Tegea seems primarily to have had a local focus, with some connection to the more developed trade nodes in the Gulf of Argos. A strong Minoan influenced trade network is also observed in Tegea from the MN and early LH with Analipsis and its strong connection to Laconia. The abandonment of Analipsis correlates with changes in the communication patterns due to a strong Mycenaean culture in the Argolid by the end of LH. The changes observed in the communication network suggest that Tegea, with its central location on the Peloponnese, could be seen as an interjection for all inland communication.

Introduction

Communication and trade are characteristic features of the Bronze Age in the Mediterranean. The material cultural record reflects contact between the various regions in the Eastern Mediterranean in this period. Both the Minoan and the Mycenaean civilisations very much depended on long-distance trade. As the Minoan palaces developed during the Middle Bronze Age the amount of imported artefacts from Egypt, Cyprus and the Middle East increased. There are also some indications of increased contact with the western Mediterranean in the same period. I see communication as a way to discuss the Late Bronze Age in Tegea and how the society developed and its role in the Mycenaean world. Communication implies contact as well as movement. A discussion of communication, and changes over time, may provide new knowledge on how the Bronze Age societies developed in relation to changes on the Peloponnese and the Aegean.

Inland communication

In the Bronze Age discourse, and especially in the Mycenaean society, communication usually means overseas trade. However, traces associated with travels on land are also found. The best documented cases for Mycenaean roads are found in the Argolid, but some sections are also known from Boeotia, Messenia, and Phokis.[1] Some of these roads are referred to as Mycenaean highways and are taken to be evidence of major engineering work. Culverts, bridges, kerbs and terraces were made to ensure a relatively gentle gradient on the road. The easy gradient, great width and a smooth surface are seen as indications for wheeled traffic. The Mycenaean highways are only found in proximity to the larger palaces, as Mycenae, Tiryns, and Pylos.[2] Especially in the Argolid there was a network of roads connecting the important palaces, but also insuring easy communication with the territory controlled by a palace. A network of roads links the palaces at Mycenae with the most fertile areas of its hinterland.[3] Lavery argues that Mycenaean highways were specially constructed to facilitate heavy vehicles, as four-wheeled carts drawn by oxen.[4] One possibility here is the inland distribution of goods arriving by ship. Access to the harbours would thus be important. One of the Mycenaean roads in the Argolid is the highway from Tiryns to the Mycenaean harbour at Epidauros.[5] These roads were suitable for chariots, though pack animals were probably more common. Larger building materials, as stone, would surely imply the need of some sort of vehicle. Metals, also arriving by ships, were shaped in ingots suitable for carriage by pack animals. The same is the case for pottery used as containers when transporting liquids. These vessels had handles convenient for carriage by pack animals.[6] In the Argolid were we have the most traces of Mycenaean highways there are also roads of a poorer quality, and tracks and paths were certainly also used as part of an extensive communication network during the LH. Smaller sections of well-built roads leading to a gate are also found at Mycenaean palaces. At the Mycenaean citadel of Gla in Boeotia one road leads to the south gate and another to the southeast gate.[7] Spyropoulos found a similar road construction at the Mycenaean settlement of Pellana in Laconia. It is a monumental road and Spyropoulos sees it in relation to a possible royal residence.[8]

1. Crowley 2008, 268.
2. Hope Simpson & Hagel 2006, 146-175; Lavery 1990, 1995.
3. Hope Simpson & Hagel 2006, 152.
4. Lavery 1990, 165.
5. Hope Simpson & Hagel 2006, 158-159.
6. Hope Simpson & Hagel 2006, 170-172.
7. Hope Simpson & Hagel 2006, 147.
8. Spyropoulos 1998, 37.

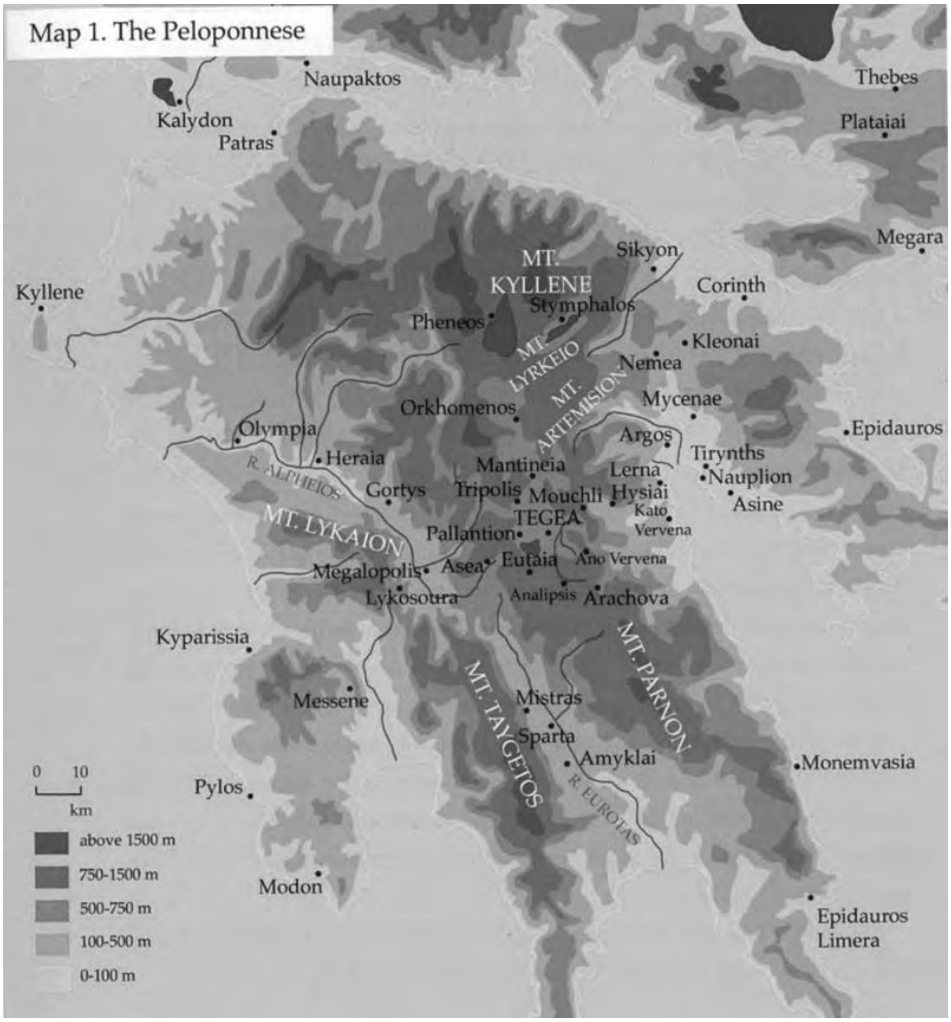


Fig. 1: *Map of Peloponnese (after Bakke 2008).*

No Bronze Age road constructions have been documented in the region of Tegea. There was, most likely a network of tracks and paths connecting the mountain plains in Tegea with the neighbouring areas. Hence, traces of communication are possibly to trace in the archaeological material. The presence of imported objects is an indication of communication as well as a trace of foreign influence. The archaeological material collected by Howell[9] as well as the assemblage collected by the project NAS, Part II were mainly locally

9. Howell 1970.

Site id	*Name*	EN	MN	LN/FN	EH	MH	LH
1	Merkovounion – Ayiolas	**X**		**X**	**X**	**X**	**X**
2	Zevgolateion – Panayia				**X**		
3	Tripolis - Ayioi Apostoloi				**X**	**X**	
4	Agiorgitika	**X**	**X**		**X**		
5	Thanas – Tourkodhendri				**X**		
6	Tzivas – Goumaradhes	**X**	**X**				
7	Thanas – Stoyia					**X**	**X**
8	Stringon-Agios Ilias				**X**		
9	Stadion - Ayios Konstantions				**X**	**X**	**X**
10	Alea - Athena Temple		**X**	**X**	**X**	**X**	**X**
11	Vounon					**X**	**X**
12	Kamarion				**X**		
13	Garea- Cherolimnes				**X**		
14	Psili Vrisi – Vationa					**X**	**X**
15	Psili Vrisi – Mirmingofolies				**X**		
16	Mirmingofolies						**X**
17	Alea – Palaiochori				**X**		**X**
18	Manthyrea – Panayia				**X**		**X**
19	Pallantion					**X**	
20	Steno				**X**	**X**	**X**
21	Agiorgitika – Sallou				**X**	**X**	
22	Analipsis	**X**	**X**				**X**
23	Vourvoura – Kakavouleri		**X**				
24	Karyai-Derveni	**X**	**X**				
25	Choma - Lake Taka						**X**
26	Agios Sostis						**X**
27	Akra				**X**		

Fig. 2: *Bronze Age settlements at the Tegean Mountain Plain.*

produced. The poor condition of these sherds often complicates an identification of the type of decoration and thus makes it difficult to obtain additional indications of influence. The vast majority of the pottery assemblage, regardless of chronological sequence, is locally produced. There are, however, also clear indications of foreign influence. The local clay results in a reddish fabric, often kept on the interior. Influenced by the fine light-coloured wares typical for the

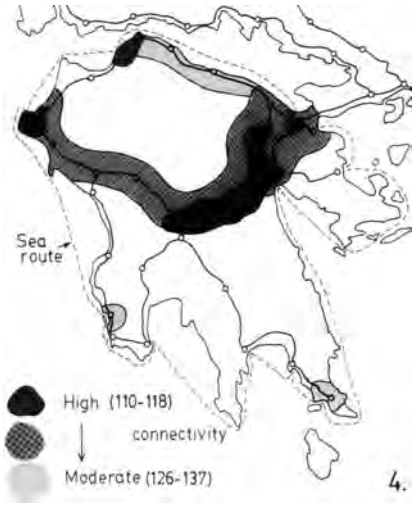


Fig. 3: *Connectivity for the Roman Peloponnese based on the Peutinger Table (after Sanders & Whitbread 1990, Fig.3.4).*

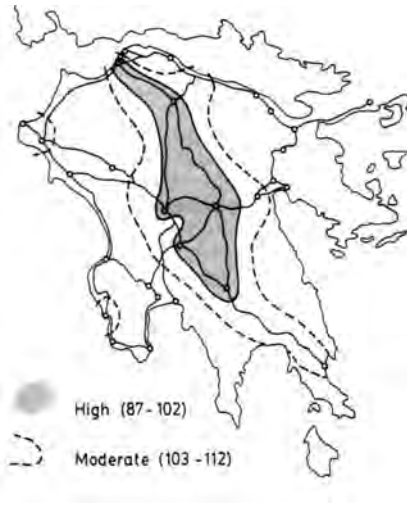


Fig. 4: *Connectivity for the Peloponnese in 1822 based on a map by George Gennadius (after Sanders & Whitbread 1990, Fig.7).*

Argolid and Corinth, the pottery very often had a bright slip on the exterior. The locally produced pottery in Tegea was also made in the same tradition, expressed in fabric and shape, as the pottery in the Argolid and at Corinth. This strong connection with the Argolid and Corinth is also seen in the locally produced pottery from Asea.[10]

Based on this brief glance at the archaeological material from Tegea one may conclude that inland communication did exist in the Bronze Age. From the viewpoint of inland communication the marginality of Tegea that have been emphasised in previous research could be questioned. In an article from 1990 Guy Sanders and Ian Whitbread discuss connectivity between ancient cities on the Peloponnese. Using the Peutinger Table (fig. 3), a medieval manuscript showing the main routes in the Roman Empire, and a later historical map by George Gennadius from 1822 (fig. 4), they review the significance of distance between the various cities that are interlinked on the maps. Distance is defined as the time needed for moving along the roads on foot. Sanders and Whitbread show that Tegea has a very central location in terms of inland communication.[11] An interesting point here is that when combining inland communication with travel by sea Tegea continues to have a favourable location in the Roman period

10. Schallin 2003, 178.
11. Sanders and Whitbread 1990.

as well as in 1822. Caution should be made, however, when trying to stretch these data back to the Bronze Age, but their argument emphasise that in many historical periods the Tegean plain was as remote and isolated an area as is often expressed in the literature about the Greek Bronze Age.

The Tegean Road Network

Having established the existence of inland communication at Tegea the challenge is to localise possible routes used during the Bronze Age. As an enclosed mountain plain there are certain topographical features that restrain communication, or at least makes it less easy. This is true for the larger Tegean plain as well as the smaller Karyai plain. One possible approach for tracing the local road network in the Bronze Age is to start a reconstruction with the major mountain passes. Björn Forsén applied a similar approach to the Bronze Age communication network in the Asea Valley. Forsén has also convincingly shown how the distribution of settlements very often did relate to such major communication lines.[12] Also information on historical roads and communication networks may give some indications of the location of Bronze Age routes.

In the vicinity of Tegea there are traces of ancient roads as well as literary sources that describe main roads passing through mountain passes. Sometimes the sources also contain descriptions of how well suited they were for travelling. The main source here is the descriptions by Pausanias in his travel guide from the 2nd century AD. He describes the mountain passes used between mountain plains in the centre of the Peloponnesian Peninsula. Based on Pausanias and other historic information regarding ancient roads together with traces of ancient wheel-ruts a reconstruction of the ancient road network in the Tegean plain is possible (fig. 5) as have been shown by Jørgen Bakke.[13] The Peutinger Table provides important information especially for the roman period.[14] The archaeological quest for ancient roads has very much centred on identifying wheel ruts and relating them to ancient roads described in literary sources. Roads with wheel ruts were a Persian invention adopted in Greece in the classical period. This kind of wheel road network was usually built for military purposes. Even in classical times, however, roads with wheel ruts would represent a small fraction of the entire network of roads, paths and tracks used for communication.[15] In ancient as well as in prehistoric times most

12. Forsén 2003, 63-71.
13. Bakke 2008, 94-102.
14. Bakke 2008, 122; Pritchett 1980, 197-206; Sanders and Whitbread 1990.
15. Bakke 2008; Forsén, B. 2003; Pikoulas 1999; Pritchett 1980.

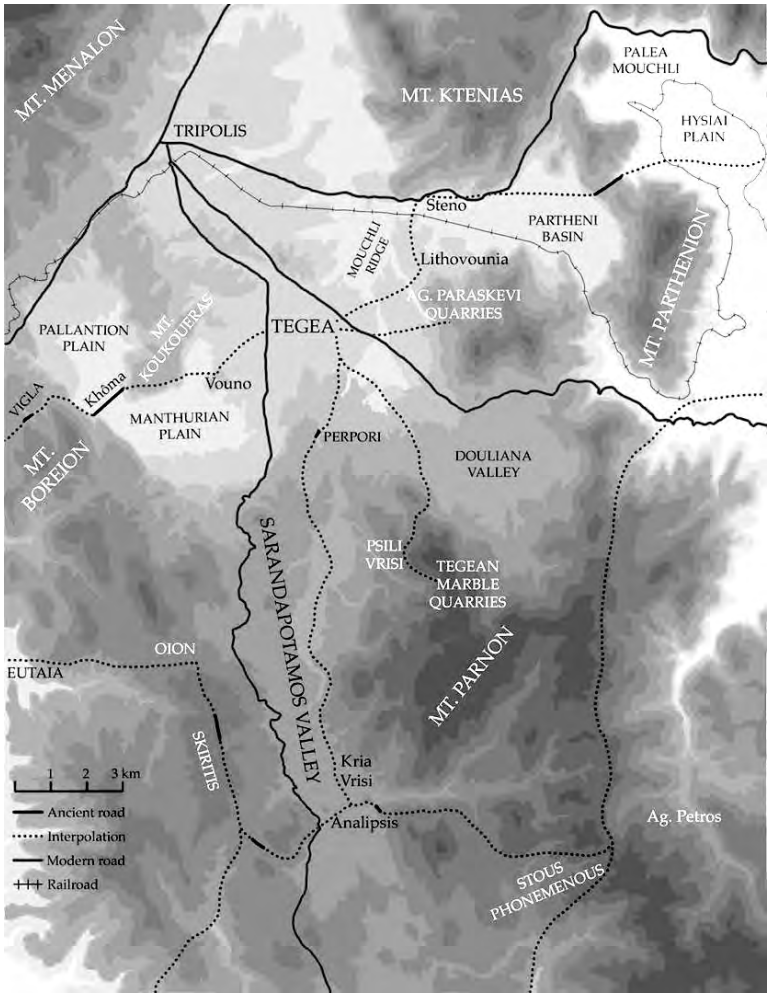


Fig. 5: *Tegean communication network (after Bakke 2008, Map 3).*

journeys would take place on foot accompanied with pack animals, none of which required roads with wheel ruts or paved roads as was a technique adopted by the Romans. The distinction between carriage-roads and roads for traveling on foot accompanied with pack animals is important because they relate quite differently to the topography. The ancient carriage-roads tend to have a rather straight course across an undulating topography and the gradient of these roads are often very steep. Roads for traveling on foot on foot, however, follow the contour of the landscape twisting and turning its way up and down the mountains.[16]

16. Bakke 2008, 90-94; Pritched 1980, 167ff.

In the Peutinger Table there is one road that passes Tegea, the east-west connection from Argos to Megalopolis. This is the same route Pausanias describes as an excellent carriage road, a highway. According to Pausanias' description the road entered Tegea through the pass between mount Ktenias and mount Parthenion. From the Partheni Basin in east the road entered the Tegean Plain, most likely passing some of the ancient locations found there, and then continued westwards over the structured Pausanias named the *Choma* and the over the Vigla Mountain pass towards Asea and Megalopolis. This is not the place for a thorough discussion and interpretation of Pausanias. I rely here on the conclusions drawn by Bakke in *Forty Rivers* from 2008.[17] That Pausanias describes this road as a highway suggests that it was of a better quality than most roads in the area. It is also significant that this was a section of the road that crossed the Peloponnese from the Isthmus in the north to Megalopolis in the south. Ancient wheel-ruts are found on two locations in relation to this highway; at the Vigla Pass and near Dalia Sterna, an Ottoman guard station in the pass between Mt. Parthenion and Mt. Ktenias. Near the ancient wheel-ruts at Dalia Sterna there are also well preserved remains of medieval and Early Modern *kaldirimia*[18] indicating that this route was used long after the wheel-ruts went out of use. Some commentators have also argued that the Peloponnesian Highway is a route that also existed during the Bronze Age if not even earlier.[19]

Björn Forsén talks about the Mycenaean highway through the Asea valley. In Asea the prehistoric settlements are located along this communication route. Especially the location of a Late Helladic settlement indicates that this route was used already in the Bronze Age.[20] Based on the description by Pausanias as well as remains in the Tegean landscape Bakke argues that the Peloponnesian Highway went along the northern side of the Partheni Basin, passed the prehistoric settlements and metallurgy sites near Ayioryitika, and continued towards Tegea and in the vicinity of Steno. These sites are, in fact, dated from the Neolithic and through to the EH. Leaving the Partheni Basin this route turned south towards the modern village Lithovounio. Towards the urban centre of the ancient city of Tegea we find the settlements Ayios Konstantinos at Stadiou and then the Ancient Temple of Athena Alea. Both sites were inhabited throughout the Bronze Age.[21] There are no archaeological traces of the Peloponnesian Highway on the Tegean

17. Bakke 2008.
18. Paved roads like this are sometimes referred to as Ottoman roads, medieval and/or Early Modern.
19. Bakke 2008, 125-126; Forsén 2002, 83.
20. Forsén 2008, 83.
21. Bakke 2008, 119-126.

plain itself. The only attested remains are in the mountain passes leading into the plain. Westwards from the ancient city of Tegea the road most likely passed the modern village Vouno before it crossed Lake Taka on the structure which Pausanias refers to as *Choma* and then continued up to the Vigla Pass.[22] During the EH three settlements are known east of Alea, Manthirea, Stringon – Ayios Ilias and Kamarion. In the later parts of the Bronze Age two settlements are known in this area, Manthirea (LH) and Vouno (MH, LH).

As part of the ancient road Pausanias mentions a feature that he calls the *Choma*, probably some kind of artificial mound of earth or a causeway.[23] It separated the Manthurian plane from the Pallantion Plane near the katavouthries. As Jost Knauss and others have argued this suggests that its original function was as a dam.[24] In that case the *Choma* would create a dam on its northern side, thus controlling the katavouthries to the southwest. The *Choma* might accordingly have been a suitable tool for irrigation and cultivation of a marshy area. In recent times Lake Taka has been a seasonal lake that is large during the winter and dries up almost completely in summer. Presently the area has been the target of a new attempt to log the water of the plain in a new artificial Lake Taka. This project has obliterated any traces of the *Choma*. In premodern times, however, the *Choma* may have provided a tool to control water in the plain both during the rainy season in the winter and in the dry summers. An additional function, which has been suggested, could be that the *Choma* also worked as a road. As Bakke has argued Pausanias' description can certainly be taken to be of a road.[25] Accordingly the *Choma* might have represented a great improvement of the route for travel in this part of the plain with rather unstable hydrological conditions.

Several other main communication routes most likely existed in Tegean territory besides the "Peloponnesian Highway". One such route is the ancient road from Tegea to Thyrea, the plain of Astros, which passed through the Doliana valley. According to Pausanias this road traversed the river Gareates and crossed the mountain barrier at Ayios Deka.[26] The river Gareates is probably the ancient name for the present river Dolianitis.[27] Faklaris argues that the road has followed the course of the Gareates River and crossed it near the church Panayias Koubliotissas, again an assumption made on the descriptions given by

22. Bakke 2008, 94-96.
23. Pausanias, 8.44.4-7.
24. Bakke 2008; Knauss 1988.
25. Bakke 2008, 94-96.
26. Pausanias 8.54.4.
27. Bakke 2008, 25; Faklaris 1990, 212.

Pausanias rather than on the observation of actual archaeological remains.[28] Near the river as well as the church of Panayias there is also a Late Ottoman roadside fountain that indicates this route was also used in the early modern period.[29] Faklaris describes several routes leaving the Doliana valley, but only refers to one place where the Gareates River was crossed. From this point onwards one route described by Faklaris took off from the Doliana valley towards Dragouni. This route also continued further southwards to the ancient crossroad at Stous Phonemenous.[30] Here, at altitude of 1200 m. was also a road side sanctuary of Hermes. Three large cairns at the highest point of the mountain pass marked the border between the territories of ancient cities of Tegea, Argos and Lacedaimon. This was a place where several communication routes converged, among them also a route from Sparta to the Argolid.[31]

Returning to the road crossing the mountain at Ayioi Deka I would argue that it might have taken a different path through the Doliana Valley than the route crossing the river near the church of Panayias. From a topographical viewpoint a road from Tegea might also have followed the northern side of the Doliana valley, taking a similar route as the modern road to Astros. From the village Rizes there is still a dirt road that leads into the Doliana Valley. The modern dirt road most likely adopts the same route as an older road. There is an ancient watch tower at a small hillock at the entrance of the Doliana Valley. This route would pass by the Ayioi Deka continuing eastwards to Sterna Ayias Sofias and further to Elliniko (ancient Thyrea) on the Astros plain.[32] The route through the Doliana valley is not often referred to in the ancient literature, an indication that this was not a very important road. Bakke sees this road as part of a local communication network.[33]

Another modern dirt road leaves the village Psili Vrisi for the mountains towards the village Vervena. There is no reference to this route in ancient literature, but there are traces of a kaldirimi near Psili Vrisi – Mirmingofolies. There are also traces of settlements dated to Late Antiquity in this area. All documented traces of past activity are located next to the present dirt road, also the remains of the kaldirimi. The local place name here *Skala* also indicates the existence of an early modern communication route here prior to the present dirt road. Skala means steps and is a common toponym for steep winding tracks, or can even

28. Bakke 2008, 329-331; Faklaris 1990, 212.
29. Bakke 2008, 180.
30. Faklaris 1990, 212.
31. Bakke 2008, 302-306; Faklaris 1990, 193-195; Romaios 1905; 1950, 235-236.
32. Faklaris 1990, 212.
33. Bakke 2008, 330.



Fig. 6: *Psili Vrisi located in the entrance of the Doliana Valley. Rizes seen in the background.*



Fig. 7: *View of the Tegean plain and Psili Vrisi seen from Skala. The dirt road from Psili Vrisi towards Vervena seen at Ayios Dimitrios.*

indicate the actual existence of steps as part of the kaldirimi.[34] That an ancient marble quarry is also located next to this road strengthen the argument for ancient communication route. Two prehistoric sites at Mirmingofolies are documented along this road, one with a few sherds of EH pottery and stone cairns and the second site is a LH settlement. This route enters the same road towards the cross section at Stous Phonemenous as the one passing Dragouni. This scenario also opens the possibility for communication toward the plain of Karyai and the LH settlement Analipsis.

34. Bakke 2008, 90-91.

In addition to the network of main roads discussed so far there also seems to have been a network of various paths in the mountain area between the Tegean plain, the Hysiai plain and southwards to the high plain of Karyai and further down to Laconia. Passing there have been several such routes both towards east and south probably passed through the Doliana Valley. Between the main Tegean Plain and the Doliana Valley there is a low ridge next to the village Psili Vrisi. On a hollow in the southeast part of this hill is the settlement Psili Vrisi – Vationa, established during the MH and abandoned in the beginning of the LH. Most routes departing from the Doliana Valley seem to have been for local communication, at least during Antiquity.[35] Still, these local routes probably connected with the important route from Sparta to Argos and the major crossroad at Stous Phonemenous. At this crossroad there was also a route westwards to Analipsis on the small mountain plain of Karyai. Analipsis was, in fact, a highland node in the ancient road network, since both east-west and north-south routes intersected here.

Analipsis is located along the ancient road between Tegea and Sparta. Ancient wheel-ruts have been observed at there as well as further northwest near the modern village Arvanitokerasea.[36] As in the Doliana Valley there was also at Analipsis several minor intersecting routes enabling communication both east-west and north-south. From the Western Peloponnese there are also several routes that were used during in Antiquity. Some of those routes might also have passed by Analipsis. From the Asea Valley there are two main connections towards Laconia that would pass by Analipsis. The Manaris pass and a mountain pass at Mt. Agios Konstantinos, entering the Langada basin. Both are documented both by written sources and archaeological finds as roads suitable for wheeled traffic.[37] Forsén see the presence of a Neolithic settlement found in the Langada Basin as an indication that this route was known and used also during the prehistoric period.[38] Both the Manaris route and the Langada route would have passed Analipsis.

Ancient wheel ruts are also found at Perpori in the Sarandapotamos Gorge, an indication that the ancient road here followed the Sarandapotamos River from the plain of Karyai and Analipsis all the way north to the Tegean Plain. On a small plateau above the river gorge, just before entering the Tegean Plain, the site Palaiochora is located. There are no clear indications of exactly what track the ancient road followed as it entered the Tegean plain. The local communication

35. Bakke 2008, 330.
36. Bakke 2008, 106-109.
37. Bakke 2008, 106-109; Forsén, B, 2003.
38. Forsén, B. 2003, 64.

centre in the plain would, no doubt, have been the ancient city of Tegea. The city plan of Tegea is well documented by magnetometer survey and archaeological excavations in the urban centre.[39] It is safe to assume that roads entering and leaving the ancient city of Tegea would approach the urban site with an orientation that related to the city plan.

One important major road from Ancient Tegea was the northwards route to the ancient cities of Mantineia and Orchomenos.[40] There is little information on the exact location of the ancient road northwards from Tegea. Just north of the urban site is the ridge between Ayios Sostis and Akra. This ridge was outside the urban centre. Archaeological remains do, however, indicate human presence over a long period. Two prehistoric sites are found here along with votive deposits of figurines raging from Archaic to Hellenistic times.[41] A road along this ridge in prehistory as well as in Antiquity would be favourable to avoid the marshy plain. Also related to this prehistoric route between Tegea and Mantinea is the site of Ayioi Apostoloi just outside Tripolis, dated to the EH and MH. Following the western slope of Mount Menalon this route would also pass the hill of Merkovounio, which was settled throughout the Bronze Age. This hill lies in the narrow passage between the Tegean plain and the plain of Mantineia. Other roads have most likely existed, both during the prehistoric periods as well as in later times.

There were certainly alternative routes in the eastern part of the Tegean plain, towards the Partheni basin.[42] An archaeological investigation in the northern part of the Tegean plain would probably result in the documentation of more prehistoric settlements, and would supply better information for discussing possible communication routes in this part of Tegean territory. I would, however, argue that the main route northwards followed the western side of the Tegean plain. This is probably a most ancient route since it passes prehistoric sites on several locations: the hillside of Ayios Sostis, Ayioi Apostoloi and Merkovounio before it enters the Mantineian plain. Along the western side of this part of the Tegean plain smaller hills creates an elevated zone between the plain and the mountain slopes of Mount Menalon. The topography of the opposite side of the plain is very different. First of all, the slopes of Mount Ktenias are rather steep making passage on the mountain slope very difficult. The lowland is also quite difficult in this area. Today this part of the plain is characterised by an abundance of water: marshes and the small lake of Pelagos. This northern part of the plain is

39. Ødegård 2011.
40. Paus. 8.10.1.
41. Bakke 2008, 155-156.
42. Paus. 8.54.5.

drained through sinkholes on the plain of Mantineia. The present situation may not represent the exact situation during the Bronze Age, but the unstable surface water here has been a problem ever since ancient times.[43]

Having established the various communication routes in the Tegean landscape that may have been used already during the Bronze Age I wish to discuss overall changes during the Bronze Age and how to relate this to the topic of communication.

Bronze Age Communication

In the EH settlements are documented over the entire plain of Tegea but not on the plain of Karyai. The lack of EH settlements on the plain of Karyai may suggest that in this period there was also little contact between Tegea and Laconia. The Palaiochora site just south of the Tegean Plain was, however, settled in this period. The Palaiochora site is situated on what at least in later periods will become one of the main north-south routes. Still, I would argue that the early settlement at Palaiochora should rather be regarded in the context of favourable local resources and soil well suited for EH agriculture. Local interaction with the Tegean Plain should not be ruled out, but there is nothing to indicate that Palaiochora was a station on a main route between Tegea and Laconia in the EH.

There is a marked concentration of prehistoric settlements in the border zone between the Partheni Basin and the Tegean Plain. Both settlements and metallurgical activity, both mining and production of copper, have been documented in this area.[44] Little is yet known about the size of this metal production or how, and to what extent, metal was exported from the area. The activity appears to have been restricted to the EH before it was restarted much later in the Early Iron Age.[45]

Interestingly, the so-called Peloponnesian Highway also passed through this area.[46] An important connection on the prehistoric Peloponnesian Highway was the site at Lerna. Strategically situated in the Argolid Bay Lerna had developed into an important local centre during the EH period, and had also become part of the regional trade network in the Aegean in this period.[47] In terms of distance the Partheni Basin, and Tegea, are not fare from the EH settlement at Lerna.

43. Bakke 2013.
44. Spyropoulos 1989, 121; Spyropoulos and Spyropoulos 2000.
45. Spyropoulos 1989; Spyropoulos and Spyropoulos 2000.
46. Bakke 2008, 125-126; Forsén 2002, 83.
47. Alberti 2013.

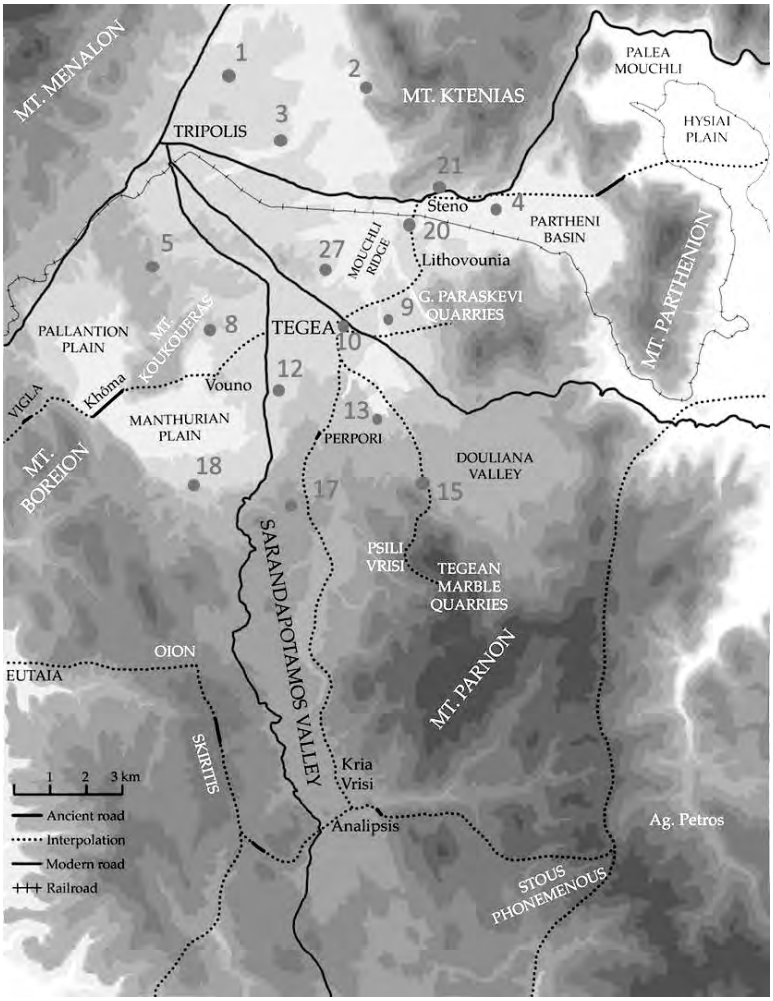


Fig. 8: *The settlement pattern during the EH period.*

It is accordingly more than likely that in the EH copper from the Partheni Basin would find its way to Lerna where Melian obsidian would have been a favourable exchange item.

Communication and trade networks at Tegea in the EH seems primarily to have had a local focus, but the copper source in the Partheni Basin also makes it very likely that Tegea was connected to the more developed trade nodes in the Gulf of Argos. Through the Lerna node Tegea might also have been connected with the large east-west trade network coined by Maria Alberti as the *Cycladic*

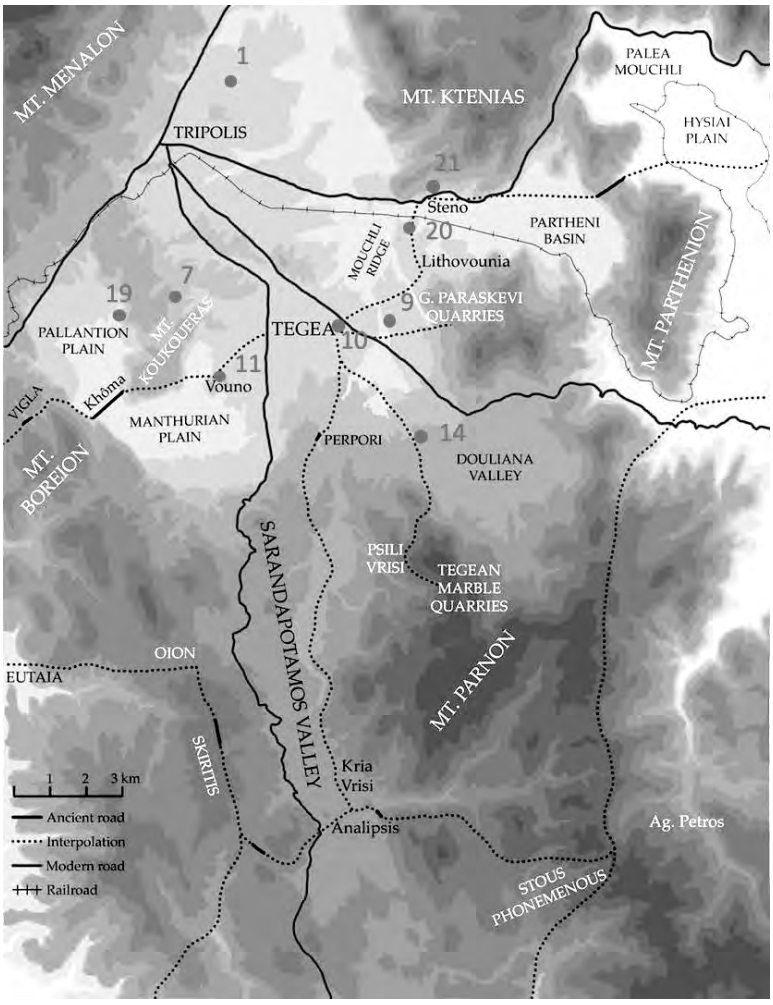


Fig. 9: *The settlement pattern during the MH period.*

circuit.[48] The route leaving the Tegean plain at the Partheni basin would thus be a major regional route for communication and trade during the EH. The easy access from Tegea to the Gulf of Argos may also have facilitated transportation further east as well as north to the settlements at the plain of Asea and the plain of Mantineia. I would here argue that the main route in the EH towards Mantineia would pass from the settlement and production site at Steno-Sallou and over the mountain towards the Loukas basin, along a kaldirimi still visible today. To the west of the Tegean Plain there are several possibilities. The concentration of

48. Alberti 2013, 26-28.

settlements in the southern part of the Tegean plain suggests that the route over the Vigla pass near Pallantion is the most likely candidate.

The development in Minoan palatial culture on Crete by the beginning of the 2nd millennium BC has profound influence on the Aegean trade network.[49] Innovations in ship technology in this period also had an impact on communication and trade. Use of boats with sails opened for longer travels overseas. The introduction of donkeys as pack animals would also have had some impact on inland communication.[50] By the Middle Bronze Age Crete was an important station connecting the Aegean with the entire eastern Mediterranean. The Aegean trade network is in this period also very much linked with Crete in north-south trading circuits. The literature on this period does, however, favour the importance of local communication networks.[51]

During the MH there is a marked reduction in number of settlements at Tegea. This change is also reflected in regional communication and trade networks. Besides from two settlements in the north-western part of the Tegean plain there is a marked concentration in the southern part of the plain in the MH. Settlements established during the MH would most likely have a location which related to the current communication network. The Psili Vrisi-Vationa site on a hill situated at the entrance to the Doliana valley was settled during the MH period. The location is quite important in the local communication network when the communication routes leading east which also connect with the north-south route between Laconia and the Gulf of Argos are taken into consideration. Laconia had a central role in the Minoanisation of the Peloponnese that can be observed during the MH and early LH. At the settlement Agios Stephanos in the Helos plain large quantities of Minoan and Minoanising pottery has been found.[52] During the MH in the Tegean plain I would argue that there is an increased focus on some major communication routes connecting both north-south as well as east-west. This can especially be observed in the marked concentration of settlement activity in the southern part of plain.

The beginning of the LH period also marks the peak of contact with Laconia as well as Minoanization at Tegea. For one thing the large tholos grave at Analipsis is from the LH period. The total lack of evidence from a LH settlement at Analipsis does, however, limit our understanding of the importance and character of this site. The finds from the cemetery do indicate that it resembles

49. Betancourt 2008, 214.
50. Alberti 2013, 29.
51. Alberti 2913, 30-32; Burns 2010, 86-87; Wright 2008, 243.
52. Cavanagh and Crouwel 2002, 144-147; Dickinson 1994, 239-250.

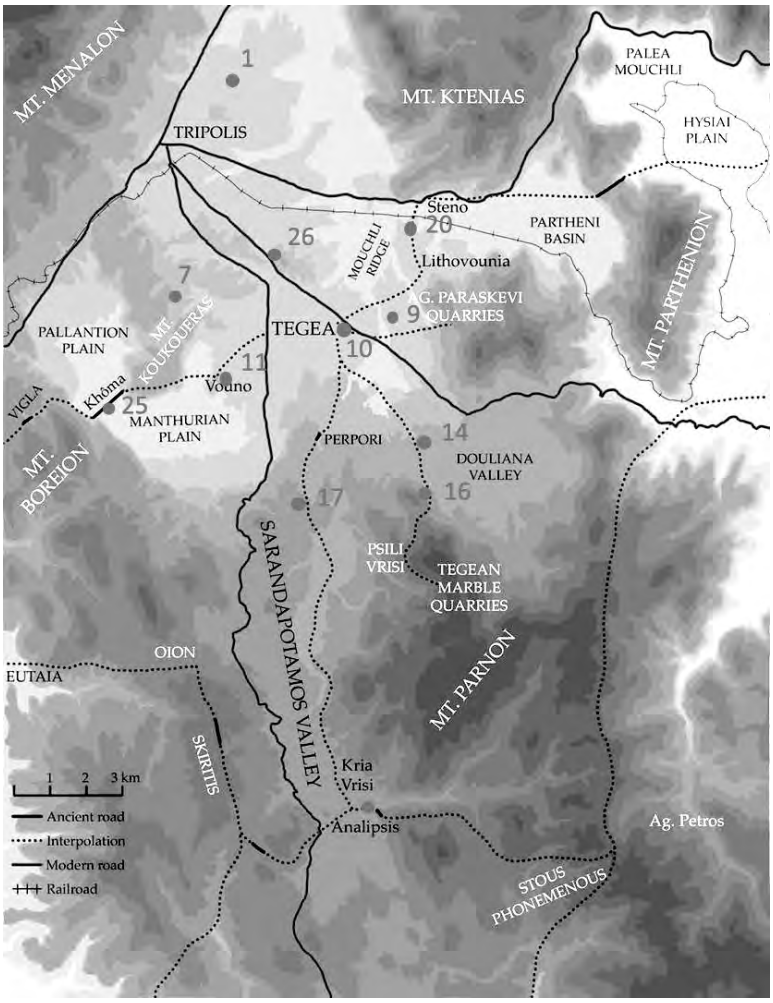


Fig. 10: *The settlement pattern during the LH period.*

the larger LH settlements found in Laconia.[53] Excavations at Menelaion and Pellana have shown that these settlements were, in fact, large administrative centres although not on the same scale as Pylos and Mycenae. The tholos graves do, however, show that a warrior-elite also had its place in Laconia as well as at Analipsis. The palatial style jars found in the tholos at Analipsis certainly indicate contact with Crete. Along with the palatial style jars in the tholos at Analipsis a variety of other exotic goods were found. Items of gold, silver, ten arrow heads in bronze as well as two ivory combs and tree amber

53. See Cavanagh and Crouwel 2002.



Fig. 11: *The large tholos at Analipsis.*

pearls are some of the imports.[54] In a group of miniature tholoi at Analipsis the grave goods do not stand out in the same manner as that from the large tholos. Faience pearls, bronze knifes and various imported figurines and pottery have been uncovered here.[55]

The palatial style jars at Analipsis clearly indicate to contact with Laconia. It is also reasonable to assume that Laconia was the source for other imported goods. It would accordingly appear that the route between Analipsis and Laconia was well established in the LH. In addition to the connection with Laconia there are also indications of contact with the north-eastern Peloponnese. Some of the pottery as well as arrow-heads in bronze do originate from the Argolid.[56] High up in the mountainous border zone between Laconia Arcadia the Analipsis site would have been somewhat of a node in the LH Peloponnesian communication and trade network.

An actual settlement at Analipsis cannot presently be documented. The archaeological material at Analipsis does, however, provide strong indications that there was an important settlement in its vicinity. As an intersection between

54. Kalogeropoulos 1998, 9-16.
55. Kalogeropoulos 1998, 17-20.
56. Kalogeropoulos 1998, 27-60 and 68-69.

north-south and east-west routes Analipsis appears to have been especially important for local Minoanization. The strong link between Analipsis and Minoan civilisation is further indicated by the abandonment of Analipsis. The palatial style jars from the large tholos at Analipsis suggests a dating preceding the peak of the Mycenaean civilisation. However, there are finds from some of the miniature tholoi dating to the LH IIIB. So far the documentation indicates that the settlement at Analipsis was abandoned by the end of LH IIIB.

Analipsis is also the site where the Minoanization of this period is most clearly expressed. There are, however, other changes that mark the shift from a strong influence from the Minoan centres in the south towards strong Mycenaean centres in the Argolid by late LH, LH IIIB. Another Tegean settlement that is abandoned by LH IIIB is Psili Vrisi - Vationa. Due to limited archaeological material there are some difficulties in distinguish the detailed chronological sequence for all LH settlements at Tegea. It is of great interest here, however, that the changes observed may also be linked to altered routes of communication. Between Analipsis and Tegea, along the north-south route passing Analipsis, there is another LH settlement, Palaiochora. The excavated material here, though limited, do suggest a settlement later than Analipsis, LH IIIC. Both the settlement and the tombs at Palaiochora have a strategic location in relation to the route southwards to Laconia. This point in the direction of long-term use of this route in the Bronze Age, but with a knot closer to the Tegean plain in the later phases of the Bronze Age.

The changes that can be observed in the settlement pattern in the Doliana Valley could be due to altered routes in communication. During the LH IIIB the settlement at Mirmingofolies was interconnected to a route across the mountains towards Vervena. This route connects with another north-south route from Laconia and the Gulf of Argos, which would facilitate easy access both to the Mycenaean centres in the Argolid as well as the rich mountain region of Parnon and the lowland in Laconia. Next to a present dirt road that adopts this route a site defined by a cluster of low cairns was dated by Roger Howell to the Early Helladic. Since very little archaeological material has been documented around these cairns the date for a settlement here is, at best, questionable. Alternatively they could be interpreted a graves related to a LH settlement. An attractive interpretation of the change in settlement pattern that can be observed in the Doliana valley is to regard it as the impact of increased importance of Mycenaean centres in Argolid. The shift of focus in this valley affected communication both towards north and south. Primarily it should also be regarded as response to the abandonment of Analipsis as a major junction in the Peloponnesian communication and trade network.



Fig. 12: *The Manthurian Plain and Lake Taka.*

Another marked change is seen on the Manthurian plain where the present Lake Taka is situated. It has been argued that the Choma mentioned by Pausanias initially was a hydraulic regulation project from the Bronze Age aimed at controlling the surface water of Lake Taka.[57] From Pausanias' description it is evident that in the days of the Roman Empire this structure also functioned as the foundation for a road across the Manthurian Plain. The date of the Choma has been questioned, but I would argue that the Late Helladic is the most likely period.[58] By the LH period there are two settlements in the vicinity of Lake Taka, Vouno and Manthirea. A construction of a dam here would also have benefitted the settlement at the site of the later sanctuary of Athena Alea. The social organisation and possible differentiation between these settlements is not known due to the limitations by the archaeological material. Instead of searching for one large administrative centre with resources to organise the construction of such a dam, I rather choose to see it as the possible result of a joint effort between several larger LH settlements in the area. The initial purpose of this structure may not have been to serve as a road, but we know from the description given by

57. Knauss 1988.
58. Hope Simpson 1994; Knauss 1988.

Pausanias that it later also was used as a road.[59] Because it would provide a stable passage across the Manthurian Plain it is plausible that the dam was used as a road already in the LH. Such a well-built road secured from the risk of flooding would especially have favoured traveling with pack animals, and accordingly the Choma may have been a most important structure for the maintenance of regional communication and trade in the LH Peloponnese.

Changes over time – concluding remarks

Movement and communication is always present in human society. How and where people move depend on the society they are part of. The Greek Bronze Age is no exception. How and where people move and communicate has changed with the various changes taking place in Greek Bronze Age society. I have here looked at the settlement structure at the Tegean plain in the Bronze Age, and its relation to possible routes of communication and trade. By discussing changes in settlement pattern, land use, and sacred space my aim has been to trace possible changes in the local and regional communication networks in this area.

During the EH there is a rather dispersed settlement pattern in the Tegan Plain and its vicinity. The Plain of Karyai represents an interesting anomaly that is important take into consideration. There is a marked concentration of activity in the Partheni Basin that is probably associated with metal production as well as important nearby settlements. The overall pattern in the EH indicate a strong connection with Lerna in the Argolid and towards the south. The communication network in this period seems to have had a focus on local interaction. During the MH and early LH there is a shift of emphasis southwards. A marked reduction in the number of settlements along with a stratification seen as can be observed in the tholos graves at Analipsis in the early parts of LH provides a local context for this shift of emphasis. The local settlement pattern as well as documented archaeological material point to a strong link with the Minoan cultural sphere in this period. No doubt the geographical mediator in this contact with Crete was Laconia. By the end of the LH the settlement at Analipsis is abandoned. The changes in the Peloponnesian communication network are obviously influenced by the establishment of strong Mycenaean centres in the Argolid. During this period the Tegean plain develops into an important node in the inland communication network of the Peloponnese. The construction of a dam in the Manthurian Plain where large amounts of surface water probably created challenges for travel in the wet season was probably also used as a road, and as such would ensure easy

59. Bakke 2008, 94-96.

access westwards throughout the year. The main influence and focus is in the LH is clearly towards the Mycenaean centres in the Argolid.

Surrounded by high mountains in the middle of the Peloponnese the Bronze Age society at Tegea was never completely isolated. With a focus on communication and trade we can observe the strategic position of Bronze Age settlements in the Tegean Plain. The changes that took place in its settlement pattern and communication network illustrates how this area was very much in tune with the overall changes that took place in the Aegean during the Bronze Age.

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Identities and 'precious' commodities at Midea and Dendra in the Mycenaean Argolid

Ann-Louise Schallin

The material basis for this investigation is the so-called precious finds from the LH IIIB2 destruction deposits at the Mycenaean citadel site of Midea. These finds reflect the inhabitants´ specific choices regarding the type of material and type of object. In characterizing these and other specific Midea finds, a better understanding of the character of the site and its inhabitants will follow. The objects, which the inhabitants chose for adornment or which were politically or socially appropriate to produce, own and display, will serve as a starting point in the endeavour to reconstruct Midean identity; a process which may prove useful when tracking emulative and competitive behaviour in the Argolid.

Introduction[1]

The finds, which here are referred to as 'precious', are made of glass, gold and ivory. These materials were used for making ornaments, beads and other jewellery. The find categories and the precious objects themselves are presented along with their find contexts whereupon they are compared with similar, published, precious finds from the citadel.[2] The precious objects at Midea occur somewhat unexpectedly in the LH IIIB2 destruction debris together with a mixture of other objects, the majority of which are pottery sherds. In most cases the objects must have originated elsewhere and were therefore found out of context in the destruction debris which seems to either have had fallen from upper storeys or have eroded from further upslope. Irrespective of where the commodities came from and whether they were the outcome of production and/or represent the remains of personal belongings, the precious finds reflect the inhabitants´ specific choices regarding the type of

1. The initial part of writing this article was carried out as a P.M. Warren Visiting Professor in Aegean Prehistory at the Institute of Greece, Rome and the Classical Tradition in 2012, at the University of Bristol. I am truly grateful for having had this opportunity and I am also grateful for the generosity and helpfulness of especially Nicoletta Momigliano and Peter Warren.

2. Schallin 2012.

material and type of object. In characterizing these and other specific Midea finds, a better understanding of the character of the site and its inhabitants will follow. The objects, which the inhabitants chose for adornment or which were politically or socially appropriate to produce, own and display, will serve as a starting point in the endeavour to reconstruct Midean identity; a process which may prove useful when tracking emulative and competitive behaviour in the Argolid.

Identity and mobility

People were mobile in the spacious sense in Mycenaean times and travelled short or long distances within their region and beyond. Then, as well as now, a region was composed of a mixture of inhabitants with different backgrounds; some had lived there for generations and some were new to the locale and had either come from outside the region or from within. The various kinds of things/objects and material, which were brought into the region naturally also express mobility. Single or multiple examples of the material culture functioned as agents, which led to developments in various aspects of the Mycenaean society as the immigrants, traders and entrepreneurs brought with them new ideas, practices and things. Thus the collective regional identity was composed of a variety of cultural expressions and was continuously changing, developing along the lines of ongoing ideas and practices.[3]

In order to better understand the relationship and the flow of influence, ideas and customs between the various regional Argive citadel sites in the Mycenaean period, we first need to define each community´s individual, local identity. The region was marked by strong competitive and emulative customs which are evident in all its cultural expressions, most noticeably to us in the remains of art and architecture; we may also assume that it was present in other spheres of society which are embedded and more difficult to observe.

Apart from presenting the Midean 'precious' objects, this paper also aims to compare the general character of these objects with those from the nearby cemetery at Dendra in order to evaluate the presupposed link between the sites. The earliest excavator at Dendra, Axel W. Persson, took it for granted that the Dendra cemetery was used for burying the dead from Midea;[4] a supposition which has not yet been properly investigated.

I am aware of the difficulty of comparing material from a settlement with material from cemetery tomb contexts which may vary considerably from

3. Díaz-Andreu and Lucy 2005, 1–2.

4. Persson 1931, 3–4.

settlement contexts with specific paraphernalia belong to a cemetery which would not be used in a settlement site and *vice versa*. Nevertheless, certain traits may exist which would link the sites and which would either indicate/prove or disprove a close relationship and positively identify the Dendra cemetery as the burial place of the Midean inhabitants. Since 'precious' objects and jewellery have indeed been found at Midea, and since precious objects, especially jewellery, were used by and worn by both the living and the dead;[5] the Midea–Dendra comparison regarding these classes of objects is especially appropriate here.

Defining a Midean identity

The local Midean identity I seek to define and explore should not be confused with ethnicity or the search for a geographic location of origin, or origins, of the Midean inhabitants. The identity I want to define is a group identity,[6] most probably consisting of a number of sub identities, such as gender, age, class, etc.[7] These Midean group identities were signalled by a set of material culture traits. Hypothetically, each Late Bronze Age subgroup in the Argive region chose to express themselves by a set of unique cultural traits, which were determined by the specific constraints and characteristics of their habitat and their relationship with their neighbouring subgroups. The various traits, of which the Midean local identities were composed, were of course mixed and entangled; this is quite natural considering the nature of the competition and emulation in the Argive region in Mycenaean times. Nevertheless, in my view each citadel communicated their particular modes of identity expressions and it is my aim to define such sets of identity markers for the Midean LH IIIB2 inhabitants.

By focussing on the material evidence it will be possible to deepen our understanding of the next level, the regional collective identity in the Argolid. More specifically, I will examine how the Mycenaean society was structured socially, economically and ideologically, especially in the Argolid where written evidence is insufficient for making far-reaching conclusions in this respect.[8] The Linear B evidence from the Argolid is not as informative regarding palace organization as, for instance it is for Pylos where the Linear B documents called the 'Ta series' inventory sacrificial equipment.[9]

5. Younger 1992; Nightingale 2000, 9.
6. Weissner 1983; Shennan 1989, 17–22; Díaz-Andreu and Lucy 2005, 23.
7. Meskell 2002, 280.
8. Shelmerdine and Bennet 2008.
9. Bennet 2008, 154.

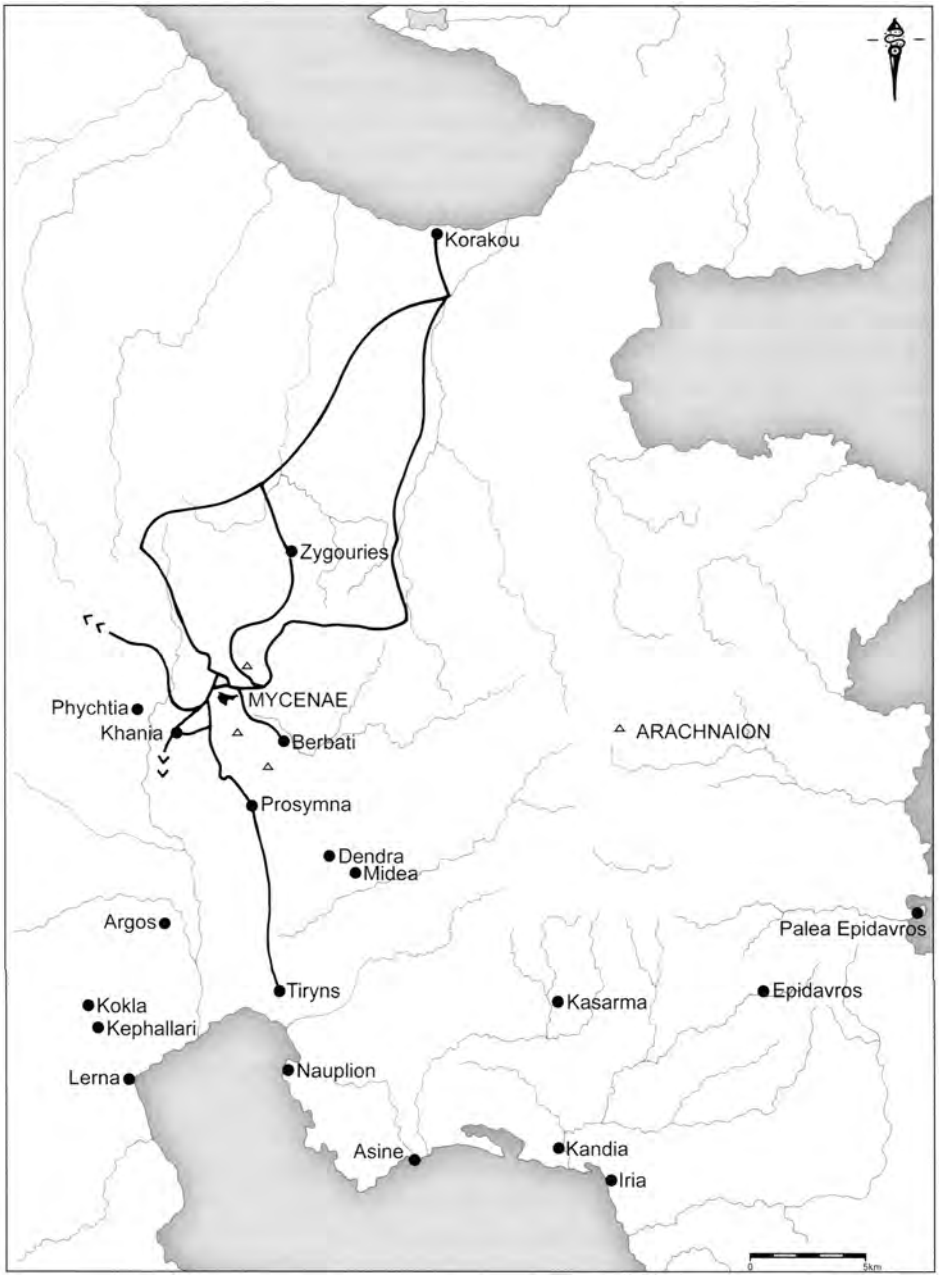


Fig. 1. *The Argolid (Copyright Mycenae Archive).*

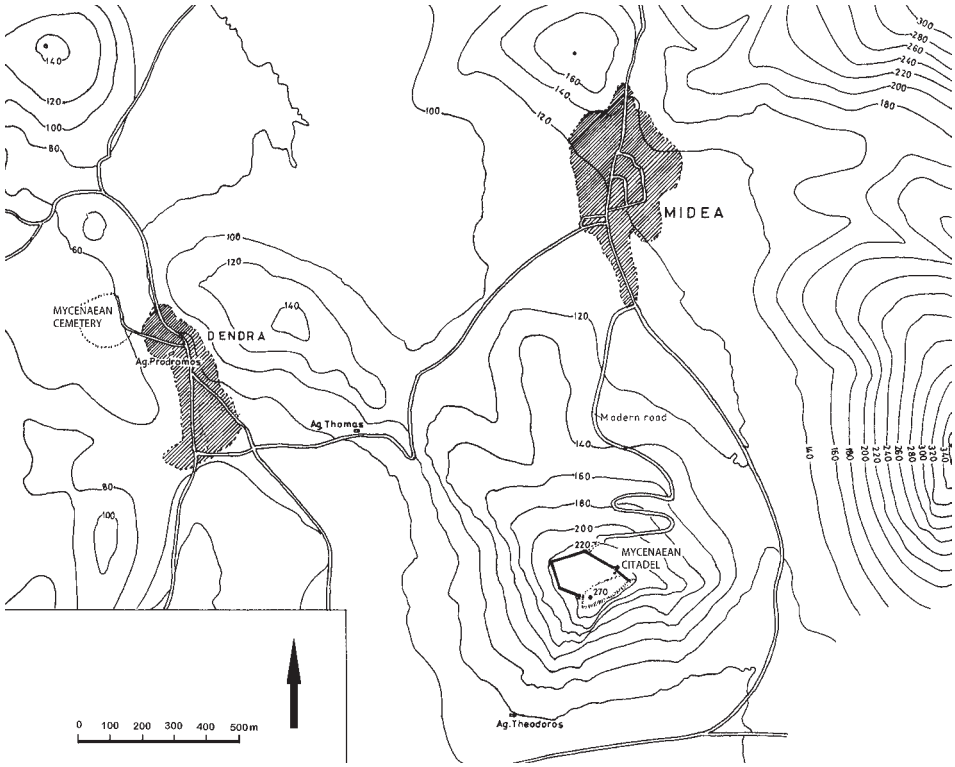


Fig. 2. *The locations of the citadel on Midea and the cemetery at Dendra (after Walberg 2007, fig. 2).*

Dendra and Midea

Dendra and Midea are located approximately 1km apart on the fringe of the Argive plain southeast of Mycenae (Fig. 1). Dendra is a cemetery of mainly Late Bronze Age chamber tombs, but other burial structures also exists there, most noteworthy is perhaps the tholos which was the first of the tombs to be excavated. Midea, on the other hand, is a settlement site within a citadel on a 270m high hill. The close relationship between the two sites has always been maintained (Fig. 2) and was one of the original notions of the first excavator at Dendra and Midea, Axel W. Persson.[10]

10. Persson 1931, 3–4.

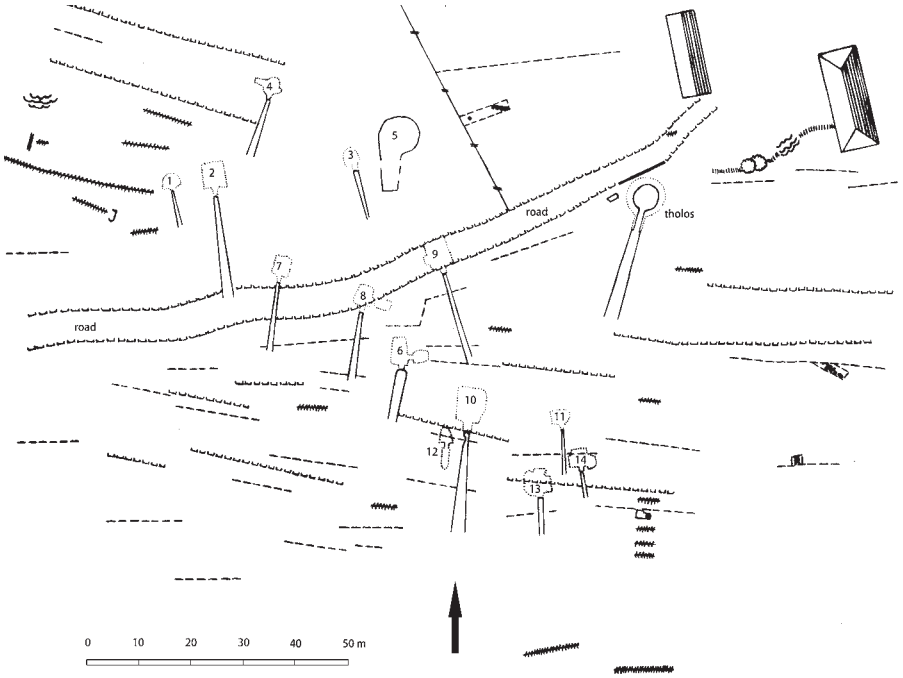


Fig. 3. *Late Helladic tombs excavated in the cemetery at Dendra (after Åström 1977:6, fig.1).*

Excavations at Dendra

The excavations at Dendra commenced in 1926 when the Swedish archaeologist Axel W. Persson was invited by Nikolaos Bertos, the ephhor at Nauplion at that time, to undertake the excavation of a tholos tomb.[11]

In 1927 chamber tombs 1, 2 and 3 (Fig. 3) were excavated by the Swedes. Bertos excavated two more in the same year: 4 and 5.[12]After a hiatus of twelve years, Persson came back to Dendra in 1939 and excavated six more chamber tombs: 6-11.[13]

In the 1960s new excavations at Dendra were compelled as a consequence of looting in one of the unexcavated chamber tombs. Nikolaos Verdelis, together with Paul Åström, discovered a precious bronze cuirass which in turn led to a new interest in the cemetery and the excavation of chamber tombs 12-14.[14] More recently Evangelia Protonotariou-Deilaki and Evangelia Pappi have revealed additional information concerning the cemetery.[15]

11. Persson 1931, 8–9.
12. Persson 1942, 17.
13. Persson 1942, 17–101
14. Åström 1977.
15. Protonotariou-Deilaki 1990; Pappi 2005 (pr. 2013).

The explorations at Midea

Persson naturally became curious about Midea while working at Dendra, and in 1939 he also conducted explorations within its citadel walls.[16] He let one of the younger archaeologists of his team, Torgny Säve-Söderberg, create some test trenches,[17] for example at the East Gate of the citadel wall. The uppermost terrace was also investigated. Since cuttings and some structural remains were observed, it was concluded that buildings had stood there and in his publication from 1942 Persson wrote that the Mycenaean palace had been placed there.[18]

While excavating chamber tombs at Dendra in the 1960s, Åström also undertook investigations within the citadel at Midea. He explored some areas close to the East Gate and concluded that the deep layers of ashy soil contained sherds which could be dated to the LH IIIB2 period at the latest.[19]

Systematic excavations at Midea started in 1983 as a Greek-Swedish collaboration project. The results have preliminarily been published in *Opuscula Atheniensia*, and in *Opuscula. The annual of the Swedish Institutes at Athens and Rome* from 2008. Moreover, two volumes of the final excavation report have hitherto appeared.[20]

The history of Midea

The most conspicuous feature on the slope of Midea is an impressive citadel wall. The wall encloses an area of 24000 square meters and it is constructed of large blocks in the Cyclopean technique, similar to the Late Bronze Age fortifications at Mycenae and Tiryns. The wall is 450 metres long, 5–7 meters in width and is preserved in a number of places to a height of 7 metres.

The remains within the citadel area date mainly to the Late Bronze Age, however, the finds give evidence of human occupation in several periods from the Late Neolithic throughout the prehistoric period. There was also activity within the walls in Archaic, Classical, Late Roman and Early Byzantine times.

The citadel wall was constructed in the middle of the 13th century, in LH IIIB2. Most of the building remains that have already been excavated belong to the same period (Fig. 4). The archaeological field work has concentrated on the two gates, The East and the West, where rooms have been uncovered built against the inner side of the fortification wall. Excavations have also revealed a habitation area on

16. Persson 1942, 3–16.
17. Persson 1942, 4, fig. 1.
18. Persson 1942, 7–12.
19. Åström 1983, 40.
20. Walberg 1998; Walberg 2007.

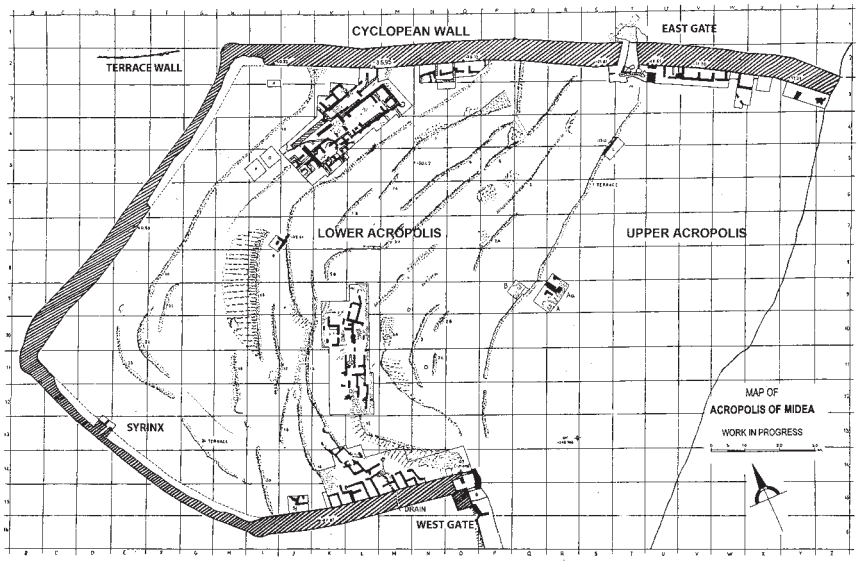


Fig. 4. *Ground plan of the Acropolis of Midea (drawing: E. Markou with additions by M. Patapatiou and A. Kiratzis).*

one of the middle terraces towards the west. Moreover, a large structure has been uncovered to the north, on a lower terrace. This building is reminiscent in plan of a classical Mycenaean megaron.[21]

Thus we can conclude that the site organisation that was revealed by archaeological excavations is the layout from LH IIIB2 and any earlier remains must have been more or less eliminated in the process. The imposing citadel wall belongs to the same period. Yet, the site experienced a severe destruction at the end of this period, which has left traces in the stratigraphy all over the citadel area. The destruction horizon at Midea consists of deep layers of ashy soil, especially in areas where the soil has accumulated, as for instance against the citadel wall. The conflagration, which befell the site at the end of LH IIIB2 is most noteworthy.[22] In spite of the severe destruction, the site was not abandoned, but the data indicates its survival on a reduced scale with the entire original citadel area probably not being taken back into use again. Importantly enough, the megaron was rebuilt with a similar, but slightly different outline which indicates a survival of the site´s social organization. However, as time went by the activity in the citadel area dwindled and the latest prehistoric remains date to LH IIIC middle.[23]

21. Maran 2001, 117; Walberg 2007.
22. Åström & Demakopoulou 1996; Walberg 1998, 176; Schallin 2012, 511.
23. Walberg 2007, 198; Demakopoulou *et al*. 2010, 11

Preconceived ideas

Persson had already made up his mind concerning the connection between the sites of Dendra and Midea from the start of his exploration and wrote: 'Beyond a doubt the tombs in the western part of the ridge at Dendra are connected with the citadel on the top of the hill and the adjacent town at the foot'.[24]

Persson envisioned a scenario consisting of a palace at the top of Midea where the king dwelt, and that one of the kings of Midea, his queen and his daughter were buried in the tholos tomb of the Dendra cemetery.

No one has contradicted Persson concerning the alleged connection between Midea and Dendra and thus the general opinion is that the cemetery belonged to the citadel of Midea.

The 'precious' commodities at Midea

Here I will use the evidence of the so-called 'precious' commodities from Midea in an investigation about the alleged connection between Dendra and Midea. I will first present the nature of the finds, which have been found at Midea, as well as my working hypothesis: i.e. that these finds constitute a part of a Midean collective group identity.

The nature of the 'precious' commodities

The 'precious' commodities, or objects I refer to here comprise beads of various shiny or glossy materials such as glass, faience or semi-precious stones. Ornaments, jewellery and other objects of gold, silver or bronze also belong to this category. Thin gold foil often covered the glass beads or was used to adorn perishable materials such as cloth or wood. Material of this kind belonged to the sphere of Mycenaean elite manifestations which were displayed in tombs of the transitional phase between the Middle and Late Helladic periods, but also later.[25] The objects were no doubt also worn and used before being deposited in the tombs. They were part of the socially competitive activities in the region at the time when the various lords on the Argive Plain were fighting for prestige and power. The custom of amassing precious goods and putting them into the tombs was therefore a common practice and did not die out but was maintained, at least during the LH IIIA and B periods. However, as time went by it seems as if the ability to procure precious objects became more common and it seems to have

24. Persson 1931, 3.

25. Eg. Bennet 2008; Jackson & Wager 2011; Whittaker 2011; Papazoglou-Manioudaki 2012.

subsequently not been an exclusively elite phenomenon. At the same time, the amount of precious objects has a tendency of abating to comprise a more limited selection when found in tombs.

East of the East Gate

The precious finds from the recent excavations in the rooms situated along the inner face of the citadel wall east of the East Gate (Figs. 4 and 5) constitute the basis for this investigation.[26] The area designated 'east of the East Gate' is reached by using a narrow and awkward passage leading from the East Gate upwards in an easterly direction to an upper terrace. In the Mycenaean destruction debris of the late 13th century there was a large amount of finds embedded in a soft soil matrix mixed with ash. Most of the finds consist of pottery sherds, but there are also many other small finds of various kinds such as a variety of stone tools; implements of antler, bone and bronze; vessels made of lead and terracotta figurines of the usual Mycenaean kinds, such as bovines and females of the Psi type. There were also a lot of fragments of lime plaster indicating the coated remains of floors and walls. Faunal and botanical remains[27] comprise bones, shells, charred seeds, carbonized figs and olive pips. Furthermore, there are fragments of jewellery in precious materials, such as gold and blue glass, as well as ornaments of ivory.

The variety of finds makes it hard to pinpoint an exact function for these rooms. The mixed debris found in the basement rooms probably contained finds emanating from upper storeys. The finds may also have originated from buildings further up the slope, i.e. to the south of the basement rooms. Furthermore, there are indications that the Late Helladic finds were mixed with material from both earlier and later periods. The processing of the material will especially shed light on the meaning of the possible later intrusions. One explanation may be that masses of soil were deposited in the basement rooms at a post-Bronze Age date and that the Mycenaean material then was mixed with both earlier and later finds.

The lack of a clear stratigraphy makes it impossible to state whether the upper storey rooms above the basement represented living quarters, store rooms or workshops. We cannot even be sure that the debris emanates from the rooms in question or from other buildings, once situated upslope to the south of the basement room area.

26. Nilsson & Schallin 2002; Alisøy, Nilsson & Schallin 2003; Nilsson & Schallin 2004; Nilsson & Schallin 2005; Nilsson & Schallin 2006-2007; Nilsson & Schallin 2008.

27. Margaritis, Demakopoulou and Schallin 2014.

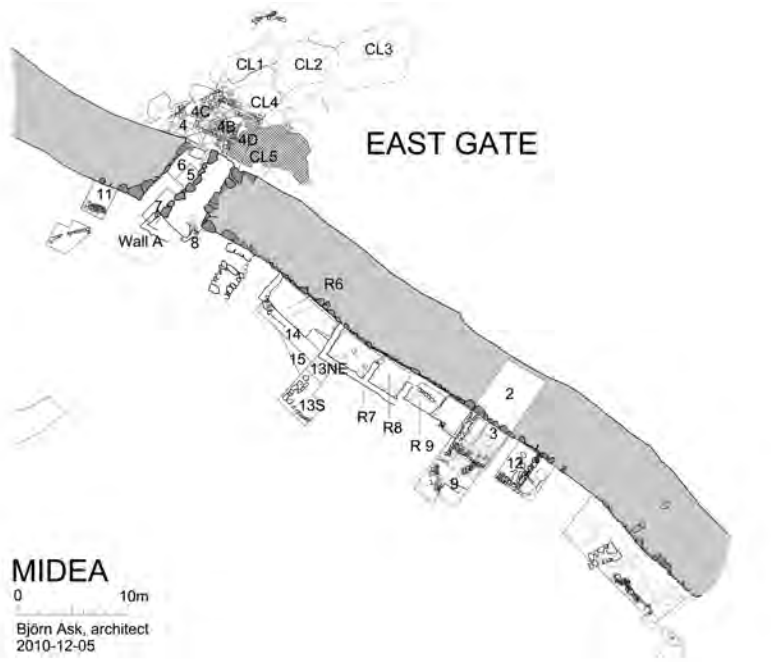


Fig. 5. *Ground plan of the areas of the East Gate and east of the East Gate (drawing: B. Ask).*

Jewellery and ornaments

Fragments and occasionally intact specimens of small ornaments and pieces of jewellery have been found in the basement debris. These items were therefore not necessarily found *in situ*, and it is not possible to state that they represent remains of the inhabitants' personal belongings or the outcome (however fragmentary) of a local production.

Simple glass beads

A number of simple beads made of blue glass have been found in the basement debris (Figs. 6 and 7). They are all oval in shape and were probably part of, or intended for, one or several necklaces or bracelets. These kinds of beads are common and also occur in other parts of the Mycenaean cultural sphere.[28] The same kind of simple beads have been found at other locations at Midea, for instance from the excavations of the buildings on the Southwest slope[29] and from

28. Nightingale 2000, 6; Nikita 2003, 28, fig. 3.8 with examples from the Agora Excavations.
29. Demakopoulou & Divari-Valakou 2002, 36, fig. 27.

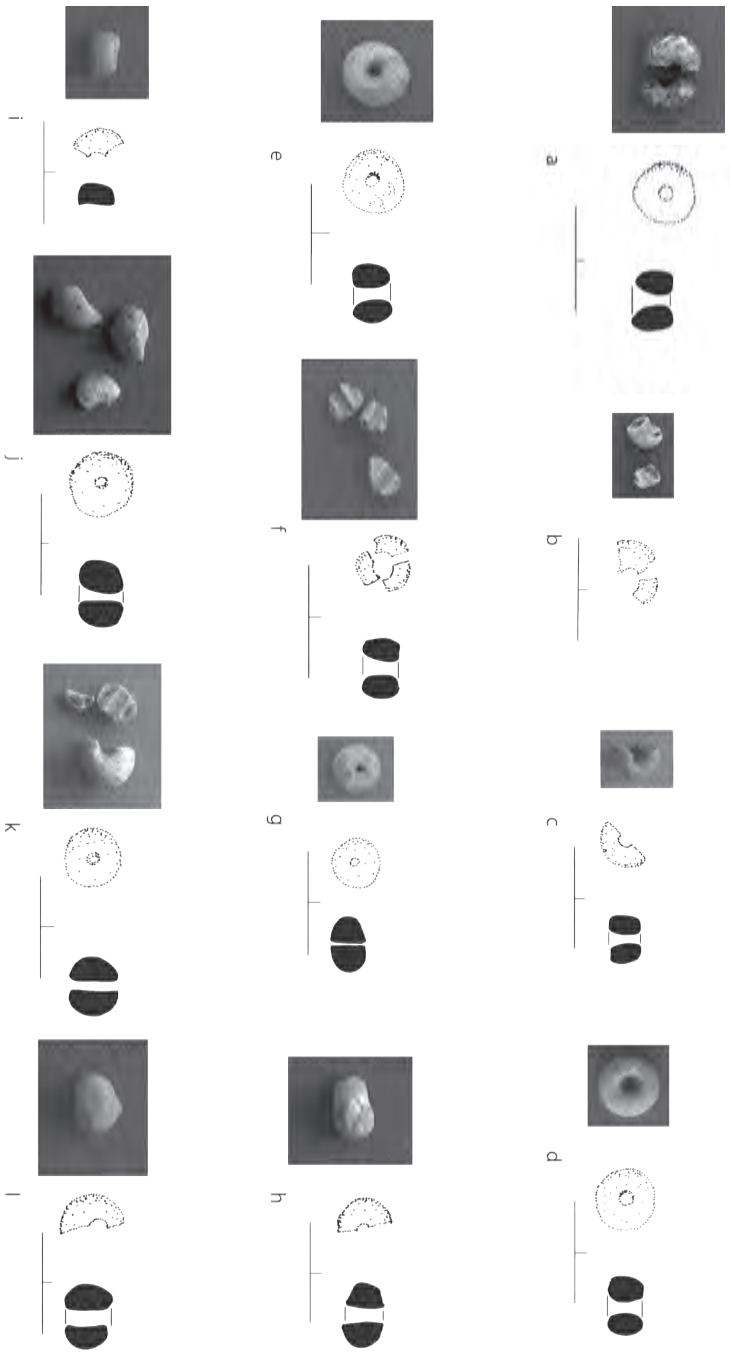


Fig. 6. *Simple glass beads with rounded profile from the area east of the East Gate, Trenches 3 and 12.*

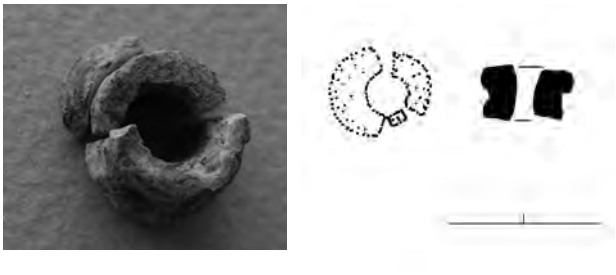


Fig. 7. *Simple glass bead with tubular profile from the area east of the East Gate, Baulk T3/R9.*

the area of the so-called megaron.[30] This implies that glass bead necklaces or bracelets were in use by the inhabitants, or stored or produced in several places. The necklace composed of disk-shaped beads found in Niche 1 in the megaron represents a more or less intact piece of jewellery of this kind.[31] Ostenso remarks that several of the simple beads recovered elsewhere in the megaron area were found outside of their original contexts.[32]

Relief beads

A different kind of bead or ornament is more elaborate and is composed of a blue glass plaque with a decoration in relief. Many beads of the same kind were often linked together forming a necklace. However some of the relief beads were just pinned or sewn onto garments.[33]

Four such beads occur in the area east of the East Gate. One of these depicts a motif consisting of fantasy creatures set against each other in a heraldic way (Fig. 8). An identical bead with the same motif was found in trench R, on the west side of the Midea citadel area.[34] An almost identical bead with the same motif, but not executed in such detail, comes from one of the Mycenae chamber tombs.[35] The demons are of the same kind as the ones on the famous gold signet ring from Tiryns of the 15th century.[36] The Midea examples, however, are less beastlike and more insect-like. Another relief bead from the same Midean context consists of a plaque at the one end of which there is a ribbed cone, or a so-called trochus shell

30. Walberg 1998, 157, pl. 111; Walberg 2007, 177, figs. 218-219.
31. Ostenso 2007, 178: G27 and G24.
32. Ostenso 2007, 178.
33. Hughes-Brock 2008, 133.
34. Demakopoulou & Divari-Valakou 2002, 32, fig. 35.
35. Xenaki-Sakellariou 1985, pl. 133, no. 4551.
36. Higgins 1980, 188, fig. 241.

(Fig. 9).[37] 'Cut-out' examples come from Midea.[38] Beads of this type occur, for example at Tiryns[39] and from the Mycenae tombs.[40] A third kind of relief bead is broken with only one end of the bead remaining. It represents a curled leaf relief ornament (Fig. 10). Intact parallels come from the Mycenae Chamber tomb 93[41] and from Thisbe in Boeotia.[42] A fourth example from the East Gate area at Midea is covered with gold foil (Fig. 11). This type of bead is common in the Mycenaean Argolid and is also represented outside the Argolid.[43] The gold was formed in a mould and details were added by a granulation technique afterwards. Other similar beads often have small, dark blue blobs set in small hollows, but there are no remains of such decoration here. The motif depicted on the bead represents a well-known figure from the Mycenaean pottery repertoire, an Argonaut – a sea-snail. Here the motif is set heraldically in pairs. Close parallels to the Midean bead come from Chamber tombs 8 and 88 at Mycenae.[44]

The Midean bead is actually the only gold find to have so far come from the material found in the citadel. Gold was most certainly considered extra precious in Mycenaean times. This is evident from the rich grave offerings and also in the way the metal was used to shape beautiful works of art. Even so, gold beads are fairly plentiful, especially in undisturbed Mycenaean tombs.[45]

Ivory ornaments

Some ivory ornaments occur among the finds. One depicts the motif of a papyrus plant which also derives from the pottery decoration repertoire (Fig. 12). It is a common motif during the Mycenaean period in the Argolid. The same motif occurs on a steatite mould from Midea[46] which indicates that it was intended for the production of glass beads with this motif in relief.

Another ivory object is of special interest. It is probably made of elephant instead of hippopotamus ivory which Krzyzskowska considers to have been

37. Ostenso 1998, 157: G6.
38. Walberg 1998, pl. 111, G6; Walberg 2003, pl. G42.
39. Nightingale 2000, 9.
40. Xenaki-Sakellariou 1985, pl. 27, no. 2271(2); pl. 92, no. 2963.
41. Xenaki-Sakalleriou 1985, pl. 132, no. 4550 (12).
42. Hughes-Brock 2008, pl. 6.2.
43. Higgins 1980, 166,171-172, figs. 206 and 214; Nikita 2003, 29-30.
44. Xenaki-Sakalleriou 1985, pl. 6, no. 2299 and pl. 117, no. 3153, 13.
45. Hughes-Brock 1999, 282.
46. Demakopoulou & Divari-Valakou 1994, 32, fig. 37.





Fig. 8. *Glass relief bead depicting a Mycenaean 'demon'.*



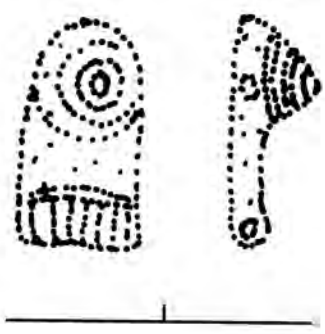


Fig. 9. *Glass relief bead with a trochus shell.*



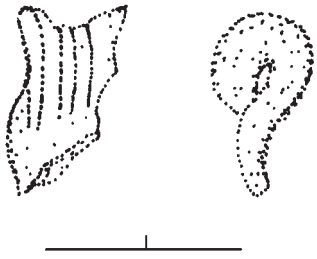


Fig. 10. *Glass relief bead in the shape of a curved leaf.*





Fig. 11. *Glass bead coated with gold leaf depicting Argonauts.*



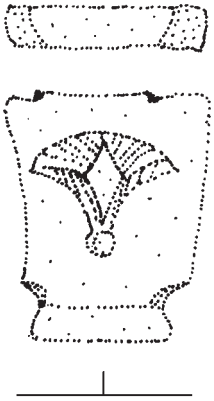


Fig. 12. *Ivory ornament with papyrus decoration.*

used for more simple ornaments.[47] It is a relief plaque in fragments depicting two figures in profile (Fig. 13). It was found in a possibly mixed Mycenaean level, and does not necessarily belong to the Mycenaean era, but possibly to a subsequent period. The fleshy lips and chin have no parallels in the Mycenaean ivories we know, but on the other hand, the muscular leg is reminiscent of the leg on an ivory plaque from Mycenae, tomb Rho.[48] Moreover, the vivacity and strength immanent in the image seems to belong more to the Mycenaean way of rendering a motif than the more stiff appearance of artistic expressions during the Archaic times. However, a possible Archaic date to this delicate piece of art should not be too surprising, since there is definite evidence for Archaic activity in this area at Midea close to the East Gate.

Chronology

These 'precious' items are therefore typical for the Mycenaean Argolid and especially for the palace sites since they express the connection with, or the wish to belong to, the elite sphere of the Mycenaean society. In the Argive region the objects were produced, or transformed from imported raw material, such as glass paste and elephant or hippopotamus ivory, to finished objects.[49] Chronologically, the objects belong to the heyday of the Mycenaean era: LH IIIA and B periods.[50]

47. Krzyzskowska 1988, 233.
48. Poursat 1977, 68, no. 240 (9562), pl. 19.
49. Bennet 2008, 164.
50. Nightingale 2000, 6.

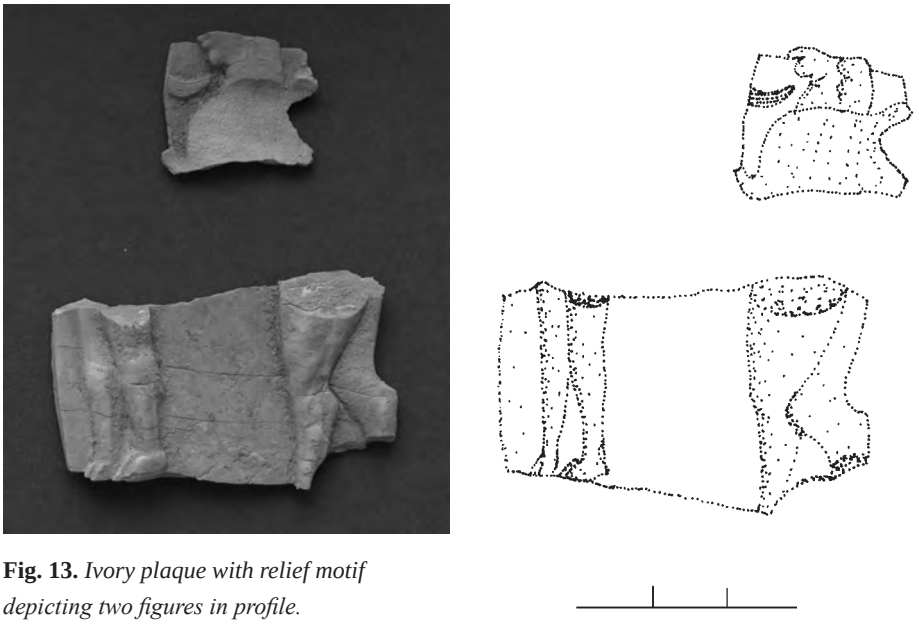


Fig. 13. *Ivory plaque with relief motif depicting two figures in profile.*

Location

Except for the ivory inlay depicting an elaborate papyrus plant (**7**), all the objects presented above derive from the area east of the East Gate (Figs. 4 and 5). The ivory inlay was found in Trench 11 in connection with a shallow stone packing. The precious objects from the upper level, east of the East Gate are concentrated to the trenches following the inner side of the citadel wall. All the small blue glass beads come from Trenches 3 and 12, which border each other. They may have belonged to one and the same necklace. Two of the relief beads also come from Trench 3, and more beads and an ivory plaque were found further downslope in rooms following the inner outline of the citadel wall.

The implication of the finds

Objects have been found belonging to the category of ornaments and jewellery all over the excavated areas within the citadel at Midea. The fact that the jewellery and the ornaments only occur as single stray finds may indicate that the inhabitants brought their finery with them when they left the site, regardless of whether they fled from a catastrophe or due to political, economical or other reasons. Only the overlooked scraps were left behind. The golden relief bead must have been dropped from an already broken necklace, or it was torn off the person who wore it.

Only fragments remain, but the objects reveal a high level of artistic skill and sophistication.

As can be deduced from the stratigraphic evidence, the precious objects are most often found together with other debris from the LH IIIB period, the period which predated the destruction and the ensuing fire catastrophe that left large parts of the site in ash and ruins. The haphazard way in which the precious finds seem to be distributed reflects the fact that they were most often not found in situ, but in secondary contexts, in mixed debris containing soil, which seems to have been moved around before being deposited. The area east of the East Gate at least, seems to consist of this kind of debris. The walls of the Mycenaean basement rooms are deep here and there is a lot of space for soil to be packed, either through erosion or with the help of people in later periods who were wishing to create level ground for their activities. The fragments and scraps of the jewellery and ornaments then become only a reflection of the richness, which may once have been stored within the citadel. The types of objects conform to what we find at nearby sites and also with those at the cemetery at the nearby Dendra which is assumed to have been the burial ground for the inhabitants at Midea.

The 'precious' objects belong to the kind of Mycenaean valuables of exotic connotation which were used in strategies of elite self-representation. The objects were thus uniquely associated with the palaces.[51] Such self-representation is seen in the rituals of burial practices of the elite, which included elaborated feasting.[52] Lena Papazoglou-Manioudaki discusses examples of such practices at Dendra and Mycenae.[53]

The relief beads are a speciality for the Mycenaean Argolid. They must have been manufactured there and were not imported. The motives vary and are both abstract and representational.[54] The relief beads may have been an insignia of some kind of religious or other official or social status. According to Hughes-Brock, they conveyed social messages, and when found outside the Mycenaean social sphere they may be seen as a type of badge of ethnicity.[55] The relief beads were produced in the palaces by a special class of blue glass workers: ku-wa-no-wo-ko.[56] The gold bead from the area east of the East Gate at Midea, together with other relief beads and the steatite mould from the West Gate area therefore indicate that production of relief beads was taking place at the site as has previously

51. Bennet 2008, 160–161.
52. E.g. Wright 2004; Whittaker, 2011.
53. Papazoglou-Manioudaki 2012.
54. Nikita 2003, 29.
55. Hughes-Brock 1999, 291.
56. Nightingale 2000, 6; Brysbaert and Vetters 2010.

been suggested.[57] Hughes-Brock discusses the manufacturing processes of relief beads[58] while Nikita discusses the function of Mycenaean glass beads.[59]

Unfortunately, there is no clear evidence of a production of glass beads at Midea, but this is unsurprising since it is difficult to identify glass-working sites and we may not necessarily expect a single-purpose work space purely for glass jewellery. It is possible that glass working was executed in areas, which may have had other functions.[60] However, a number of stone moulds at nearby Mycenae more or less certify the existence of glass bead production at this site, even if the moulds were not found in the specific work area. Tournavitou has made a catalogue of glass moulds found in Mainland Greece, including Mycenae,[61] and Susan Lupack also discusses the Mycenaean jewellery workshop areas.[62] One of the Mycenae moulds is of particular interest for the Midean case. It was found at Mycenae, in the Citadel House area, in a dubious workshop context. It is of particular interest, since it was meant for the production of glass beads in the shape of paired Argonauts, just like the gold-covered glass relief bead from Midea which was presented above.[63] The production of vitreous materials has also been attested at Tiryns.[64]

It is likewise uncertain whether Midea housed an ivory workshop. A lot of skill and technique was required to produce beautiful ivory carvings, not only due to the delicacy of the carving, but also during the preparation of the material.[65] The scant ivory evidence at Midea is not comparable to the vast remains of ivory working in, for example the Houses of the Sphinxes and the Shields at Mycenae.[66]

The local identity of the Mideans

All the material traits at Midea no doubt express the site´s and the inhabitants' unique character in comparison with their neighbours. The Midean material traits conform to the Mycenaean culture in general, but there are individual characteristics

57. Demakopoulou and Divari-Valakou 1994, 34; Voutsaki 2001, 196; Hughes-Brock 2003, 12; Demakopoulou 2007, 70.
58. Hughes-Brock 1999, 287-290.
59. Nikita 2003, 33-34.
60. Tournavitou 1997, 230, 232; Nikita 2003, 24; Tournavitou 1988.
61. Tournavitou 1997, 243–253.
62. Lupack 1999, 30–32.
63. Evely 1992, pl. 4; Tournavitou 1997, pl. 7.
64. Panagiotaki *et al.* 2005; Brysbaert and Wetters 2010, 34–35.
65. Krzyszkowska 1984, 124; Krzyszkowska 1988, 214; Velsink 2003, 9.
66. Tournavitou 1995, esp. 123–206.

which can be identified when studying various aspects of the site and the finds. The material traits mirror the inhabitants' social status, their preferences, their occupation, and their relations with neighbouring sites in the region.

The 'precious' finds from the area east of the East Gate at Midea could have been produced at the site. It is possible that production of ivory ornaments and glass beads of various kinds was taking place, even though we still have no real proof of this. Another possibility is that the 'precious' objects had been produced elsewhere and were kept and stored at the site, i.e. that they were the inhabitant´s personal belongings. The ornaments may have decorated pieces of furniture, but the beads were used for necklaces or other jewellery which may have been worn on specific occasions by certain members of the community who were perhaps designated various roles in a social hierarchy.

The precious objects were used as prestige items and were displayed at social gatherings, such as feasts and funerals; they were subsequently deposited in tombs. The presence of these finds at Midea tells us that the inhabitants conformed to the common standards of Mycenaean elite behaviour and that they were competing in prestige with the same sort of commodities as their powerful neighbours in Mycenae and Tiryns.

Only further study of all kinds of Midean finds will inform us of the specific relationships between Midea and its neighbours. A first step towards a characterization of a specific Midea identity is presented below where the 'precious' finds of Midea are compared with the precious finds from Dendra: Midea´s alleged cemetery. The aim is to deduce possible expressions of similar identities.

The 'precious' objects at Dendra

The following is an overview and a selection of the contexts and the nature of the precious objects found in the Dendra tombs. The most relevant examples are brought forward with finds comparable to the 'precious' ones at Midea.

The tholos

Three human skeletons were found buried in two pits under the floor of the tholos chamber. Rich finds are connected with all three interments, such as gold drinking vessels, necklaces, gold rings, etc.[67] Human bones were also found mixed with animal bones in another pit under the floor of the chamber. The bones were

67. Persson 1931, 13–18, 31–40.

accompanied by some round faience beads.[68] In a fourth pit under the chamber floor charcoal and fragments of gold, bronze, burnt ivory and beads of faience and semi-precious stones were found.[69]

Additional human bones from at least three individuals were found scattered in the tomb on the chamber floor. In connection with these bones, Late Mycenaean vase fragments were found along with a number of small gold objects, some long pierced agathe beads, a hundred or so faience beads which were shaped like grains of wheat and an almond shaped stone engraved with a deer.[70]

Furthermore, a burial was found in the dromos, close to the stomion, more than two metres above the floor-level of the chamber. A Protogeometric amphora accompanied the dead, but there were no precious objects connected to this burial.[71]

The chamber tombs

Chamber tomb 2 displays a number of peculiar constructional details. Its dromos is 20 metres long, which is unusually long for a chamber tomb, and the chamber was hewn in the shape of a house with a saddle roof.[72] Inside the stomion, a door opening leading from the dromos into the chamber, a pit had been dug within which 35 bronze objects were stacked, the majority of which comprised of large vessels.[73] Pieces of cut sand stone were found in the chamber which proved to be a bench with square depressions in the corners, or according to Persson a slaughtering table,[74] when put together. Furthermore, there were two hewn stones, each with a small projection at one end. Along the short inner wall, there was a low hearth or altar built of small stones and covered with plaster.

On the chamber floor, there were also quite a lot of small precious finds, such as gold objects of various kinds and glass beads, etc.[75]

Since no human bones were found in connection with these finds, Persson interpreted this tomb as a cenotaph.[76] However, a burial had been inserted into the dromos at a later date. The skeleton of a woman, according to Persson, was

68. Persson 1931, 18.
69. Persson 1931, 18.
70. Persson 1931, 12, 29-31.
71. Persson, 11, 41, fig. 24.
72. Persson 1931, 73–75, 93, fig. 65.
73. Persson 1931, 76–77, figs. 50 and 51.
74. Persson 1931, 77-80, figs. 52-53.
75. Persson 1981, 105, fig. 80.
76. Persson 1931, 80.

not actually found in the chamber, but in the dromos. She was accompanied by a bronze needle and some spindle whorls.[77]

Chamber tomb 3 contained a disarray of the bones of ca 7 individuals. Among other finds, such as Psi figurines, there were precious objects comprising four tweezers, rings of gold wire, a bronze knife and lead wire.[78] Precious finds from *Chamber tomb 6* comprise a sealstone, an amethyst bead, glass beads and bronze arrow heads.[79] Among other finds from *Chamber tombs 7 and 8* were a gold ring, beads of gold, amethyst and glass, a sealstone of agathe, lots of pieces of boars´ tusks and arrow heads of flint and obsidian.[80]

Chamber tomb 10 was equipped with many precious finds of amber, faience, gold and glass, as well as silver vessels and an ornate silver spoon.[81]

Similarities in 'precious' objects between tombs at Dendra versus citadel at Midea

The next step in this analysis is to demonstrate any possible links between the sites of Midea and Dendra regarding the 'precious' objects which would indicate a shared expression of identity.

There are of course general resemblances in the material record which both Midea and Dendra shared with their Mycenaean neighbours, but there are no obvious cases of similarities which we could see as direct proof of a close relationship. However, some shared traits can be observed. The Midea and Dendra similarities are here compared with examples from the Mycenae chamber tombs, which were presented by Xenaki-Sakellariou.[82]

A sword pommel of light agate from the 'king´s' burial in the tholos[83] is the same kind as the stone sword pommel found in Niche 1 in the Midea megaron,[84] although the materials differ. Sword pommels also occur in the Mycenae chamber tombs. There is one ivory example which corresponds to a similar example from the Midea megaron.[85]

77. Persson 1931, 74, 92, fig. 63.
78. Persson 1931, 86-90, fig. 62.
79. Persson 1942, 27, fig. 30.
80. Persson 1942, 36, fig. 36; 46, 48–49, figs. 50–53.
81. Persson 1942, 84–85, 87–89, figs. 92–101.
82. Xenaki-Sakellariou 1985.
83. Persson, 1931, 35, no. 11, pl. 25 bottom.
84. Walberg 2007, 179, pl. C.
85. Xenaki-Sakelleriou 1985, pl. 129, no. 3212 (7).

The simple round glass beads that occur in the basement debris in the rooms east of the East Gate were also found in a niche in the Midea megaron[86] as well as other places at Midea. They also occur abundantly in some of the tombs. Seal stones of various types occur both in the tombs and at the site. In the tholos tomb, specifically inside one of the gold cups in the king´s burial, six lentoid seal stones of agate were found.[87] The agate seal found in Trench RJ in the building complex on the Southwest slope on Midea is made from the same material.[88] Moreover, the amygdaloid shape is similar to another seal from the Dendra tombs, which probably also depicts bovids.[89] Seals of various types are likewise commonly found in the Argive tombs.

There is also a similarity regarding a kind of grain-shaped glass bead, which occurs in both tombs and in the citadel area.[90] The same kind of elongated glass beads in the shape of grains are identified as being typical of Mycenae and are common in the Argolid.[91]

Arrow heads of flint or obsidian can perhaps not obviously be classed as prestige items or 'precious', but seem to have been used as display pieces in the Dendra tombs.[92] As grave gifts they may signify prestige linked with warfare and hunting, suitable and fitting of elite activities, which were also emulated by less highly ranked inhabitants in the Argive region. The same kinds of arrow heads occur in various contexts at Midea.[93] Arrow heads of flint and obsidian also occur, for example, in the Mycenae chamber tombs.

Elaborate glass relief beads, like the fragmentary one found east of the East Gate at Midea (No. 3 above) also occur in the Dendra tombs, in the tholos and in Chamber tomb 2.[94] However, the relief motives don´t seem to be the same and differ as the Dendra examples are pierced in a way which suggests that they were perhaps nailed to something, while the Midea example may represent a bead since it had two perforations running inside the decorative borders framing the central motif. At Mycenae there are exact parallels to the gold foil glass bead decorated with Argonauts in pairs (as demonstrated above when discussing no. **6**). From the

86. Walberg 2007, 177-178, figs. 218, 219.
87. Persson 1931, 32, no. 3, pl. 29.
88. Demakopoulou, Divari-Valakou and Schallin 2003, 15, fig. 25.
89. Persson 1931, pl. 25.
90. Persson 1931, pls. 15, 35; Walberg 2007, fig. 219: G28; Demakopoulou, Divari-Valakou & Schallin 2003, 19, fig. 41.
91. Nightingale 2000, 8–9, figs. 19–20.
92. Persson 1942, 46, fig. 50.
93. E.g. Demakopoulou *et al.* 2004, 15, fig. 14.
94. Persson 1931, 105, fig. 80; pl. 8.

Mycenae tombs, there are also exact parallels to the trochus shell glass beads.[95] Furthermore, the glass relief bead with depicted demons from Midea has an exact parallel from a chamber tomb at Mycenae.[96]

A similarity worth noting is the fact that four bronze tweezers were found in Chamber tomb 3[97] and a very similar example was found in Room V in the building complex of the southwest slope.[98] Tweezers of various types are common in the Mycenae chamber tombs.[99]

The Mycenaean iconography was wide and varied. Some motifs are more common than others and occur both in the Dendra cemetery, on the Midea citadel and in the rest of the Mycenaean world. One common example is the rosette, which were used in ornaments of various materials.[100]

Another common recurring motif is the Argonaut – FM 22 in pottery terms,[101] which is the motif of the gold foil glass relief bead (no. 6 above). The motif occurs on a gold ornament from Dendra,[102] and was commonly used as a motif for 'precious' objects.

Significance for a shared identity

Even if the evidence is rather slight when it comes to links and similarities between the two sites regarding the 'precious' objects, they are nevertheless there. It seems that Midea and Dendra in fact shared a common language of expression in their way of using this kind of objects. The shared use of 'precious' objects, however, is not a local phenomenon or an expression of identity exclusively for Midea and Dendra, but is rather a shared regional, or a wider Mycenaean cultural, way of dealing with the precious objects which mirrors shared customs and similar ways that the elite members of the Mycenaean palace sites communicate self-representation. For example, when comparing the precious objects from Midea and Dendra with the same kind of material from the chamber tombs at nearby Mycenae, there are many particular parallels.

All these similarities regarding the type of grave goods, materials and decorative features signify shared views and traditions among the Mycenaeans.

95. Xenaki-Sakellariou 1985, pl. 27, no. 2271(2); pl. 92, no. 2963.
96. Xenaki-Sakellariou 1985, pl. 133, no. 4551.
97. Persson 1931, 89, fig. 62.
98. Demakopoulou *et al.* 2003, 14, fig. 19.
99. Xenaki-Sakellariou 1985, e.g. pl 9, no. 2386.
100. E.g. Persson 1931, 105, fig. 80; Walberg 2007, pl. 25:B35.
101. Furumark 1941.
102. Persson 1931, pl. 33:f.

It is quite possible that such similarities are strongest between closely located sites and that they diminish as the distance grows. The similarities in 'precious' objects occurring in the Argive region is obvious, and close similarities in the cultural expressions encompassed vast areas in Mycenaean times. It is possible that the material at Dendra and Midea, when further studied, may reveal other related links which have only been suggested as the materials and contexts have a variety of connotations and each example can be further investigated.

The evidence indicates a specific, but complex relationship between the site of Midea and the cemetery at Dendra. The Dendra cemetery played an important role for the Midean inhabitants and special ceremonies connected the sites. Dendra may possibly have served a wider region as a ceremonial area where the cult connected with the dead was in focus.[103] The original tombs at Dendra were built in LH II with more tombs being added as time went on. At the same time the old tombs were continuously used, some throughout the Bronze Age. In the LH IIIB when the Midea citadel area was created, the tombs were actively in use.[104] The richest and most affluent interments seem to belong to the early phase, while the later burials, more contemporary with the actual remains from the citadel at Midea are fewer and the accompanying grave goods are more humble. The fact that less valuables are displayed in the tombs is in fact a regional Argive trend. At Midea, there is also evidence of activity in the earlier Late Helladic phases, but there is still no evidence of elite architecture befitting the king of the tholos, who was allegedly burial in LH IIIA1. If there was such architecture at Midea, all of it must have been demolished in the reorganization of the citadel in LH IIIB2. There is therefore a chronological discrepancy in the material evidence regarding tombs versus a citadel. The LH IIIB2 architecture revealed so far in the citadel area belongs to three main categories: rooms built along the inner face of the citadel wall, which were most probably used for storage and/or production; buildings on the central terrace, which were the homes of the inhabitants and the large and monumental structure called the Megaron, which constituted the palace at Midea, and which presumably belonged to, and was used for the activities of, the Midean elite. Persson, not knowing anything about the Megaron,[105] envisioned a palace at the summit of Midea, the remains of which were never especially obvious.

103. Cavanagh & Mee 1998; Gallou 2005.
104. Sjöberg 2001, 156.
105. Persson 1942, 7–12.

The chronological imbalance in the material evidence between the cemetery- and the citadel may even out if we add the evidence coming from the Midean Lower Town: evidence which is insufficiently known, but which has been identified in past fieldwork.[106]

Summary and conclusion

This article started out with the aim of presenting the precious objects found in the recent excavations at Midea in the area of the East Gate, and to add these finds as part of the material setup constituting a Midean identity. The 'precious' objects were found in mixed deposits together with a lot of debris emanating from the severe destruction and fire at the site at the end of LH IIIB2. The amount of 'precious' finds from east of the East Gate are limited to a handful, but the published finds of this type from the rest of the citadel area give a fuller picture of the Midean setup. Whether the Mideans themselves actually produced the precious objects on the site is an important question when regarding how we should conceive their identity in relation to their neighbours since Mycenaean glass and ivory production is a potential trait for the existence of a palace organization. The 'precious' objects were used by the Mycenaean elite for self-representation and wearing, owning or displaying. For example, blue glass relief beads demonstrated a social Mycenaean palace elite identity. In order to strengthen the case of a Midean local identity regarding 'precious' objects, the evidence from the nearby cemetery at Dendra was used with the aim of finding the existence of a strong bond between the sites expressed in the material record. From this analysis it was concluded that not only do Midea and Dendra share basic similarities regarding their use of 'precious' objects, but there are some basic similarities in the material which both sites share with other cemeteries and sites in the Argive region as well as in Mycenaean contexts beyond the Argolid.

It has been argued by Voutsaki[107] that Mycenae was in control of the production and distribution of precious goods in the Argolid, especially gold, and that Midea, together with Tiryns, was allied with Mycenae. As an ally it was possible for the Mideans to produce sealstones and ivory, for example, but not gold and ivory objects which were especially valuable and reserved only for Mycenae to produce. This notion corresponds rather well with the archaeological evidence at Midea. There are indeed strong indications of glass working at the site since Nikita mentions semi-worked or malformed glass ornaments in conjunction with

106. Hägg 1963; Åström 1983, 17-21, 56-58.
107. Voutsaki 2010, 101-103.

a steatite mould for casting gold or glass jewellery,[108] but no proper work-shop area has yet been identified. Regarding the ivory- and gold objects at the site, these could have been provided by Mycenae according to Voutsaki's hypothesis.[109]

There are a few indications of production of precious commodities at Midea, but there is no proper evidence in the form of workshop space at the site. The small number of indications may either mean that production was going on, but on a limited scale, or else that the few cases of fragmentary raw materials and half-finished products in the eyes of the inhabitants also belonged to the category of 'precious' objects and were kept and treated as such.

The 'precious' commodities at Midea and Dendra are no doubt an important component in the emerging image of a Midean identity, but only further study of the material remains will make this image understandable.

Catalogue

Simple glass beads

Measurements in cm.

1. (Fig. 6) Twelve spherical, perforated blue glass beads with a rounded profile.

a. Inv. no. G2002:1. Trench 3. Layer 3. Bead broken in two frgms. D. 1.2; pierced hole 0.2.

b. Inv. no. G2002:2. Trench 3. Layer 3. Two frgms. Est. D. 1.3; Pierced hole 0.4.

c. Inv. no. G2002:3. Trench 3. Layer 3S. Half of bead preserved. D. 1.1; pierced hole 0.2.

d. Inv. no. G2002:4. Trench 3. Layer 3S. Intact bead. D. 1.2; pierced hole 0.25.

e. Inv. no. G2002:5. Trench 3. Layer 3S. Intact bead. D. 1.2; pierced hole 0.2.

f. Inv. no. G2002:6. Trench 3. Layer 3S. Bead broken in three frgms. D. 1.2; pierced hole 0.4.

g. Inv. no. G2002:7. Trench 3. Layer 3S W wall. Intact bead. D. 1; pierced hole 0.15.

h. Inv. no. G2009:2. Trench 12. Layer 4a. Half of bead preserved. D. 1.2; pierced hole 0.2.

i. Inv. no. G2009:3. Trench 12. Layer 4a. One third of bead preserved. D. 1.2; pierced hole 0.2.

j. Inv. no. G2009:4. Trench 12. Layer 4a. Bead broken in three frgms. D. 1.4; pierced hole 0.2.

k. Inv. no. G2009:5. Trench 12. Layer 4a. Bead broken in three frgms: one large and two small. D. 1.5; pierced hole 0.4.

l. Inv. no. G2009:6. Trench 12. Layer 4a. One frgm representing half a bead. D. 1.3; pierced hole 0.4.

2. (Fig. 7) One spherical, perforated blue glass bead with an edged, tubular profile.

Inv. no.G2007:1. Baulk T3/R9. Layer 4. One bead in three fragments. Max D.1,3; pierced hole 0.3.

108. Nikita 2008.

109. Voutsaki 2010.

Relief beads

3. (Fig. 8) Relief plaque bead of blue glass with string holes along the borders.
Inv. no. G2009:1. Trench 12. Layer 4a. D. 2.2 x 3.5. Th. 0.1-0.5. Between two raised borders, main motif consisting of two winged demons.

4. (Fig. 9) Relief bead/plaque of blue glass with string holes at both ends.
Inv. no. G2002:8. Trench 3. Layer 3S. Intact. Max D. 1.5 x 0.8. The bead/plaque is decorated with a raised border at one end and a trochus shell at the other.

5. (Fig. 10) Curled leaf relief ornament/bead of blue glass.
Inv. no. G2002:9. Trench 3. Layer 3S. Max D. 2 x 1.1. Broken off fragment, consisting of a ribbed, curled leaf.

6. (Fig. 11) Gold relief bead with central string hole.
Inv. no. M2005:1 (MN 31901). Trench 14. Layer 3 N of stone packing. D. 2 x 1. Blue glass covered with gold foil. Motif in relief: heraldically paired Argonauts in "cut-out style";[110] details in granulation technique. Both short sides of bead are damaged.

Ivory ornaments

7. (Fig. 12) Relief plaque/inlay of ivory.
Inv. no. B2004:3. Trench 11S. Layer 2. D. 2.9 x 2.4; th. 0.5. Plaque with slanting sides and with carved flat projections at two ends. Surface depicts an elaborately carved papyrus pattern in relief.

8. (Fig. 13) Relief plaque of ivory.
Inv. no. B2007:1. Baulk T3/R9. Layer 4. Two fragments, which belong to the same plaque, but they don´t fit. Th. 0.5.
a. D. 5 x 3.2. The fragment depicts two pairs of cut-off legs in relief. The legs to the left ends in hoofs, thus representing the legs of an animal, while the legs to the right are rendered as muscular and should belong to a man.
b. D. 2.1 x 2.1. This damaged fragment depicts the lower part of a man´s face - with the hair rendered shoulder long - and torso, and the pointed end of a possible horn of an animal.

110. Nightingale 2000, 6.

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Color, materiality, sensory experience and Late Bronze Age burials in the Argolid

Carole Gillis

One aspect of tombs and burials in the BA Aegean in general that has not received much notice is that of color (hue and shine). Were certain hues more predominant than others? Was this significant? Was the presence (or absence) of shine of importance? Following a discussion of 'what is color?', the study and results of the colors of the finds from Late Bronze Age tombs at three sites in the Greek Argolid, Asine, Berbati and Dendra, are analyzed, followed by a brief review of the theoretical background used here regarding symbolism, materiality and agency. This theoretical structure and the aspect of possible color symbolism are then combined with the material objects and in specific with the color analyses to determine whether this method could 1) offer broader interpretative possibilities for understanding displays of hue and shine and 2) add other dimensions beyond the conventional interpretations of anthropocentric shows of kinship, status and power in LBA Argolid burial contexts. The aspect of local and global is discussed. The study ends by presenting a scenario of a hypothetical Aegean Late Bronze Age burial incorporating these and other sensory aspects. [1]

Introduction: The background and aims of the study

My interest in color arose from my studies of tin-covered vessels[2] when I realized that many vessels, simple and complex, slipped, monochromed or painted, found only in rich LBA III tombs on Crete and on the mainland were completely covered with strips of tin foil.[3] Further, I discovered that roughly half of the tin coating would have had the original color (i.e., they would have been shiny and

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2. See, for example, Gillis 1996; 1999; 2004.

3. Gillis and Bohm 1994.

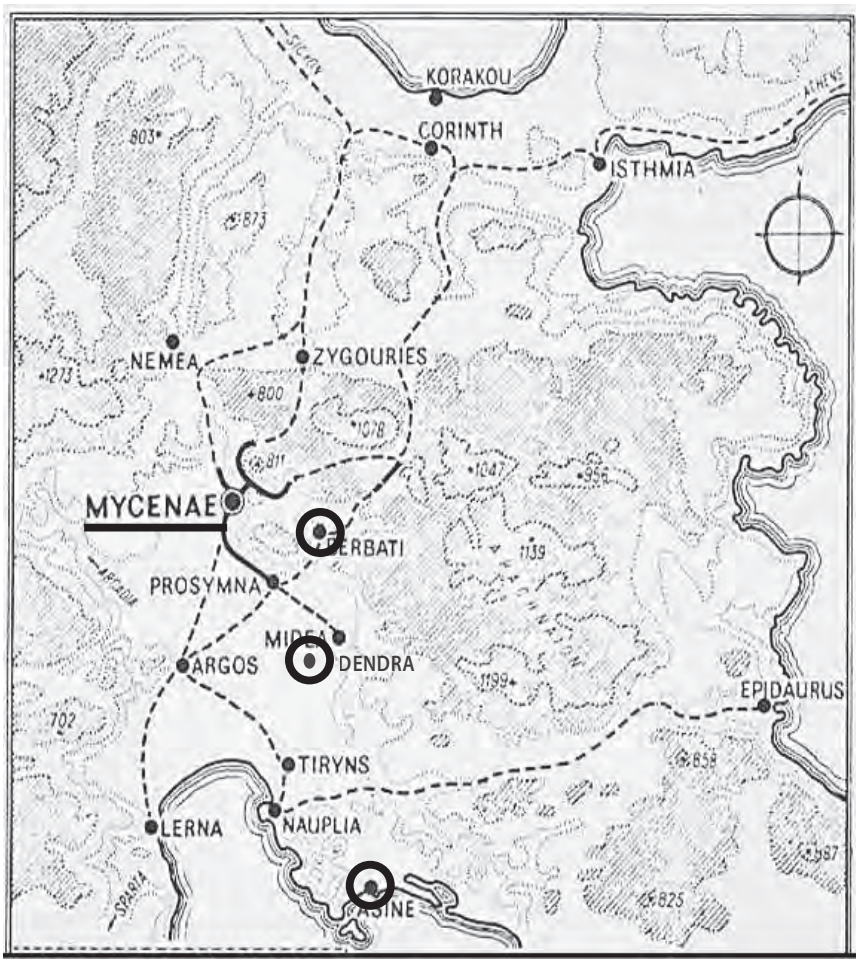


Fig. 1: *Map of the Peloponnese in the Bronze age, showing the principle sites mentioned in the article: Asine, Berbati and Midea/Dendra.*

silvery), and half would have had a golden hue, the result of deliberate oxidation.[4] One obvious question at the time was 'why cover a pottery vase with foil at all', especially since some vase forms which never appeared in solid metal were tinned: clearly, the purpose was not to trick viewers into thinking they were solid gold or silver - and what would be the point of changing the hue in half of them.

A combination of this initial interest in tin-coated vessels in grave contexts and the question of why they were treated thus led to further studies of colors in general in these graves: understanding the use of color might provide more

4. Gillis *et al*. 1995; Gillis 1999, 291-94.

insight into its possible symbolism and significance for the Aegean Late Bronze Age people. I decided to examine not just tin-coated vessels, or just metal objects, but to make a study of the colors of the grave goods from LBA tombs. As a pilot study I looked at the published chamber tombs (ChT) from Asine[5] and enlarged the study to include the ChTs from Berbati and Dendra[6] (Fig. 1) to see whether or not, and possibly how, choice/use of color in its wider meaning might add new information to the understanding of Late Bronze Age Argolid burials.

In this present work, the results from the previous studies regarding the colors of the grave gifts will be viewed again through the perspective of materiality and agency. After a discussion on 'what is color', and different approaches to understanding it, a review of the three sites Asine, Berbati and Dendra (the studies mentioned above) and the results of the studies comparing the finds vis-à-vis color are briefly presented and discussed. The next section concerns color and materiality, with first a discussion of symbolism, continuing with materiality and agency as theories and their applications to this study, followed by a discussion of possible color symbolism. The matter of 'local-global' is taken up. Finally the conclusions are incorporated into a hypothetical scenario of a burial in the LBA Argolid. Let us begin with a discussion of 'color'.

Color

Color is all around us, affecting our lives both consciously and subconsciously and can be studied in many different ways: among them, the biology of seeing and perceiving colors, their psychological and psycho-linguistic applications (including their reception, a large area in marketing and PR).[7] One of the more common areas of color research in antiquity lies in the general field of linguistics, language study, semantics, etc., based on the use of color terms in texts and inscriptions, from Linear B through Homeric Greek to Hellenistic and Latin texts. These terms are studied for their etymology, their 'real' meanings in their literary contexts, their shifting connotations, their social implications, and so on.[8]

Non-linguistic aspects of actual color - its uses and possible meanings in ancient contexts - have not received much attention in the archaeological literature until very recently, and are still somewhat uncommon: there have been several conferences, some volumes devoted to the subject, and some articles

5. Gillis 1996, 2012, 2013.
6. Gillis forthcoming.
7. Gillis 2013, no. 11, 12.
8. Gillis 2013, n. 12; forthcoming, n. 6.

concerning color in antiquity, however.[9] One area of contention is 'color terms'.[10] In this present study these 'color terms' were adapted, broadened or grouped together to accommodate the archaeological realities of the LBA grave material.

How do we define 'color'? One approach in understanding and working with 'color' is the work done by John Gage, former Head of the Art History Department at Cambridge University.[11] He describes 'color' as having three major components or aspects: hue: what is commonly called 'color', such as red or blue or gray, with subdivisions (crimson, navy, charcoal) called tints or shades -- variations of a hue; value: the brightness/shininess or dullness of a color; and saturation: the intensity, strength, *chroma* – the degree of strength, such as the range from pale pink through red to deep crimson, with pink being the least saturated and crimson, the most. In fact, these concepts are nothing new -- they were known and used even by the ancients in historical times, rather than terms for hues.[12] This differentiated understanding of color is more flexible and allows a more nuanced categorization. It was seen in my previous studies that the aspect of saturation, or intensity, of hue in the analyses was difficult to measure but above all indeterminate, and thus did not seem applicable in the BA context: it was therefore left out in the current study (see discussion below). In the following, 'color' as consisting of components of hue and value ('value' here in the Gagean sense, being the degree or lack of shininess, not to be confused with any considerations of socio-economic worth) will be the model used.

A very different approach to color is that of Gibson, who believes that our perception of the world and our relation to it cannot be quantified or measured and should not be viewed 'scientifically'.[13] Instead, he applies an in his terms 'ecological' or environmental approach to visual perception, in which everything is fluid and depends on the moment and means of perception, not on universal rules. He speaks also of the properties of color, hue, brightness or the opposite, and saturation. However, the colors are perceived through the reflectance[14] of light on the 'terrestrial environment, consisting of surface, substance and medium', and understood through several modes: opacity or translucence, type of surface (smooth, matte, etc.), degree of luminosity, homogeneous or conglomerate

9. For conferences and volumes, Gillis 2013 with n. 1-11 and a condensed version in Gillis 2012, n. 5; for articles on color in various materials and contexts, Gillis forthcoming, n. 10-17.
10. For a discussion of color terms, see, e.g., Berlin and Kay 1969; Gillis 2013:63-64; Gillis forthcoming, n. 6, 9.
11. Gage 1993, 1999a, 1999b.
12. Pollitt 2000.
13. Gibson 1985 (1979), 30-32, 52-53, 97-100.
14. His term: the active emanation of light, rather than merely the reflecting of it.

hues, surface softness-hardness, and reflectance, to name some. This approach is generally more difficult to apply to ancient objects in graves (indeed, ancient objects in general); however, there is some relevance to be found here as well, something which will be taken up below in the final analysis.

One area in the study of 'color' that has not been investigated in depth regarding the objects placed in graves is the question of whether their hues and shine value in general or in specific have any particular importance, symbolically or in any other way? Were some of these objects and gifts placed there primarily because of a specific hue and shine rather than for other reasons or was the selection of gifts and their materials meant only to show socio-economic power, wealth and position?

The study[15]

The wish to answer these questions about any possible role of colors of objects in the graves led to studies of all the (non-architectural, non-osteological, and non-tin-treated pottery) finds from all the available graves for three LBA burial sites in the Argolid: Asine, Berbati and Dendra, as mentioned above. The detailed results of this enlarged study will appear soon.[16]

At Asine,[17] eight (of 26) Bronze Age Mycenaean chamber tombs from two Mycenaean necropoleis were found and excavated on the Barbouna Hill by the Swedish team led by O. Frödin and A.W.Persson in the 1920's and 1930. Three (I:3, I:4 and II:1) of these eight chamber tombs from these Mycenaean necropoleis were more or less empty of finds, while the contents from the other five are exceedingly rich, much more so than seems justified by the surrounding settlement areas found and excavated so far. Judging by the pottery, these five (probably family) tombs were in use from LHIIB/IIIA through to LHIIIC late, a span of 250-300 years.[18] The remaining tombs were excavated in the 70's by a Greek team but remain unpublished, as do finds from a third (probably later) necropolis beyond necropolis II. This means that the Asine material in the first two studies, as noted above, was limited to a small number of graves on one site: regardless of the results, they were based on a very little sample from a single site.

15. As much of the material about the background, analyses and results has been published or is soon to be (Gillis 2012, 2013, forthcoming), I will give only an abridged version here, with references.
16. Gillis forthcoming.
17. Asine - Frödin and Persson 1938; Hägg, eds., 1996.
18. E.g., Mountjoy 1996; for discussion of the possibility of family or group tombs, van Wijngaarden 2012, 64, 68.

The published Mycenaean chamber tombs excavated at Berbati included nos. 1, 2, 3, 8, 10, 11 and 12 in the so-called Western Necropolis,[19] a tholos tomb[20] and an isolated chamber tomb.[21] Unfortunately even though Persson excavated the whole area of Berbati in the mid-1930's, nothing was published until long after. The vicissitudes of time, WWII, and the collapse of the storeroom shelves *i.a.* have resulted in the loss of a lot of the finds, as both E. Holmberg and B. Santillo Frizell noted in their publications; the paucity of finds in these latter, isolated tombs could also indicate that these graves were plundered.

Dendra was published in two major volumes by Persson,[22] including the Mycenaean ChTs 6, 7, 8, 9, 10, and 11 in 1931, and the so-called Royal Tomb plus ChTs 1-3 in 1942, while P. Åström[23] excavated and subsequently published ChT 12, the so-called Cuirass Tomb, plus ChTs 13 and 14.[24] ChTs 4 and 5 were excavated by a Greek archaeologist in the 1920's and remain to my knowledge unpublished.[25]

The finds from all the tombs in the study were registered by material, number of objects in each category (following the MNI method) and hue (simplified down to ten categories) as well as value, being shiny/reflective or matte. The sample in Fig. 2 is an excerpt from a registration form used for the five chamber tombs from Asine. By color-coding the entries I could also register value (=shiny or matte) in the same tables.[26] After some additions and subtractions, I resolved on 10 hue group to be used here (rather than the eleven general hue groupings

19. Berbati - Säflund 1965.
20. Berbati - Santillo Frizell 1984.
21. Berbati - Holmberg 1983.
22. Dendra – Persson 1931; 1942.
23. Dendra – Åström 1977; 1983.
24. In the early 1960's, three ChTs, 12, 13 and 14, were excavated by Åstrom (Dendra - Åström 1977). All three had been plundered. The famous cuirass grave (ChT 12) had also been robbed but the actual cuirass burial with a cuirass, greaves, weapons, etc., and a boar's tooth helmet was evidently missed by the plunderers. In addition, apart from pottery and all the various components of the bronze armor, 70 boars' teeth from one helmet, three silver objects and some few loose pieces of ivory were found. In ChT 13 apart from the pottery, 14 steatite spindle whorls of various colors and 2 bronze items were recovered. ChT 14 contained only one find besides the pottery, a steatite spindle whorl. Thus as with the three fairly empty ChTs from Asine, the finds from these three were not included in the analyses.
25. Åström 1977, 4; 1983, 6.
26. See Gillis 2013, tables 2-5.

				wh/s	y/g	grn	blu	gry	o-r-rbr	r/p	br	bl/dark	variegated
I:1	pottery	75+5 (ca50)											
		tin	anal-10 tin, 16 prob	28									
			2 decor tin										
	metal	gold	gold+bron ring		10								
			gold, bron, silv ring										
			29+ gold obj										
		silver	1 vase	1									
		bronze	no mention in As I		7								
			many obj, incl 5 vessels										
		iron	?					(x)					
		lead	rivet, ?pin					2					
	stone	agate(onyx)	one ?burnt					1				1	x
		agate									1		
		carnelian	3, one red, two r/p						1	2			
		steatite	32+ conoli various hues								1	31+	
		amber	18 beads						13			5	
			pendents										
	ivory/bone		various, frgm, obj	7									
	vitr. mat-fai		7 badly weathered										
I:2	pottery	53 (ca 50)											
		tin	2 tinned	2									
	metal	gold	21 rosettes, 22 spirals		10								
			19 beads, 9 filig, etc										
		bronze	mirror, arrowheads		30								
	stone	porphyry	bowl-egypt										
		lapis laced	lamp										
		alabaster	frgs 3 bowls	3									
		steatite	"										x
		steatite	1 button										x
		agate	1 bead										
		amber	2 beads						2				
		rock crystal	9, flower, with ivory	1									
	ivory/bone/ tusk		unique obj, many bits	8									
	Vitr.matglass		rosettes, lg beads,etc				6+						
I:5	pottery	17											
			?tinned										
	metal	gold	many bits and pieces		5+								
			3 necklaces in vessel										
			one necklace gold +										
			glass alt										

Fig. 2: *A sample of the registration format with the hues on the horizontal axis and the material types on the vertical one*

used by Berlin and Kay for example or computerized color identification).[27] The materials they are found on are as follows:

Hue	**Material**
White/light	tin foil, rock crystal, silver, ivory, bone, tusk, alabaster (7)
Yellow/gold	oxidized tin foil, gold, bronze, yellow flint, some agate (5)
Green	glass, green steatite, jadeite, lapis lacedaemonian/ (Gillis 2012, note 36) (4)
Gray/ gray-blue, gray-green	lead, iron, flint, stone (4)
Violet	vitreous material, amethyst (2)
Turquoise	vitreous material (1)
Blue	vitreous material, lapis lazuli (2)
Orange/red/red-brown	amber, (carnelian), vitreous material, copper, red steatite(4)
Red-purple, purple	porphyry, amethyst, carnelian (3)
Black/dark	obsidian, steatite, pebble, painted faience, painted terracotta, vitreous material, burnt agate, burnt amber, other stone (8)

After evaluating the results of the first studies (Asine) and the material from the other two sites, certain changes and generalizations were made: in the present study, all glass, faience, and 'glass paste' are included in a category entitled 'vitreous materials'. The hue of all glass that can no longer be determined ocularly or was not mentioned in publications is considered as cobalt -- the by far most common hue for the Aegean -- and the value as 'shiny'.[28] This includes all such material that has vitrified and has no visible hue today. Further, all ivory and bone objects were considered polished and reflective (as opposed to matte) unless

27. Using color charts like Munsell or Macbeth would be counterproductive, in my opinion. They narrow down a hue to its smallest denominator, whereas I wish to see groups, not individuals. In my opinion, hues were more dependent on general categories (blue, red) and the realities of supply and trade than possibilities of choice. Although this classification/division may seem arbitrary, I believe that it reflects the archaeological realities better. Even the separation into 'blue' and 'turquoise' is not as arbitrary as it could seem as the one (cobalt blue) is quite common and the other (turquoise), rather rare. The 10 divisions are more dependent on the reality of the materials available than on ideal hues in an ideal world.

28. 'Shiny' is opposed to 'matte', though it was sometimes more luminous than directly reflective. The great predominance of shiny cobalt was indicated by Prof . G. Nightingale, Prof. R. Brill, and Dr. A. Shortland, in independent pers. comms. My thanks to them. See also Nightingale 2006, 43; 2008, 67; Gillis 2012, n. 23-26; forthcoming, n. 17-19.

otherwise stated in the publications;[29] all amber was registered as orange-red-red/brown and shiny and all steatite was considered dark/black and shiny, unless otherwise noted. These choices may seem arbitrary, but in my opinion it was the best approach for the material at hand.

There were also many stones which were variegated and thus could not be registered under one or another hue category; further, steatite and quartz can come in many hues and were not registered for hue if I did not observe them personally or if the hue was not noted in the publication. They were registered for 'value', however, whenever possible. Further, many stone types do not have to be polished although they usually are: unless these stones were seen personally by me and could thus be registered, they were excluded from the value analysis.

As mentioned above, the aspect of saturation was perhaps of lesser importance. In the results of the first two studies, those of the Asine material, saturation did not seem to follow any pattern or have any significance. This became even clearer when looking at the analyses for saturation from all three sites. Further, the assessment of saturation had been arbitrarily decided by me in the earlier studies: white, silver, beige, etc., were obliviously low saturation as the black/dark hues were clearly high saturation, but the determination of degree of intensity (between high and low vis-à-vis medium, for example, or whether a bright blue was as saturated as a deep red, and whether these should be medium or high saturation, to give another example) was much more difficult. The possibility of calculating the saturations digitally through my photos was rejected due to potential differences in photo quality vs. visual observation, as well as (as for the case of hue) because of the probability that the objects were chosen on grounds of what was available, although there is no way to know this for a fact. Thus, noting the difficulties and inconclusive results for saturation in the first two studies and the difficulty for anyone else to replicate the method, I decided to exclude saturation entirely from the analyses.[30]

The question of whether or not to include the non-tinned pottery was a difficult one as well. In the first study I registered all pottery as red/red-brown and as matte.[31] This meant that statistically this category was one of the largest ones. This seemed misleading, however, for several reasons: 1) much of the pottery has a slip that is more brownish, or buff than red/red-brown. Is this white/light, yellow, brown? 2) Most of the grave pottery is decorated: thus, a vase could have at least two hues – which hue should these be registered as? For example: due to the reduction and reoxidation firing processes and the thickness of the 'paint',

29. Personal observation and Prof. O. Krzyszkowska, pers. comm.

30. For more on this, Gillis 2012, n. 37.

31. Gillis 2013, n. 34, where I discuss these problems.

the same decorated band on a vase could range in hue from red through brown to black. Adding the base tone of the slip to this would make four or more hues, creating a situation similar to the variegated stones – multi-hued and impossible to assign as a single hue; 3) the question of alternatives is often absent in pottery. Pottery was a necessity, not a choice, for containing liquids and for possible ritual feasting in combination with the burial. Further, there is no alternative to clay hues, except for kaolin clays (white, iron-free), which are not common; 4) the surface of the pottery could be in part matte, in part semi-shiny, especially the 'painted' parts, depending on the finishing process. Thus, due to all the problems mentioned, all non-tinned pottery will continue to be absent from the study.

On the other hand, a good bit of the pottery was tin-covered. This ceramic surface treatment is found in grave contexts only, and must be considered a deliberate choice exclusively for burials - definitely not made for reasons of functionality but rather a conscious alteration and should therefore be registered. Further, analysis of a number of random tin-covered sherds indicated that roughly 50% of these 42 sherds from a number of graves and sites had been oxidized to a shiny yellow/gold hue, while *c.* 50% retained their original shiny white/silver hue.[32] Following this division, all the registered tin-coated vessels were dividing equally between white/silver and yellow/gold.

The analysis results

Hue

Using MSExcel to process the information in the database and to represent the results in the form of bar graphs gave the following results: for hue, looking first at Asine for ChTs 1,2, 5-7 (Fig. 3a), the dominant hue is clearly yellow/gold (due in part to the number of tin-covered clay vessels – see above), followed by black/dark and only somewhat less, by white/light (also due in part to the large number of tinned vessels, of which 50% are registered as white/light and 50% as yellow/gold). These three hues are found in all the graves. Four other hues (gray, violet and dark red/red-purple) are represented minimally and two others (green and turquoise), not at all.

Looking at the results from Dendra (Fig. 3b), we see that yellow/gold is predominant by far, followed by black/dark and in third place, by white/light for the chamber tombs, blue for the Royal Tomb. Of the other hues, both the Royal Tomb and the combined chamber tombs have five of the seven remaining hues: however, only three coincide, gray plus blue and dark red/red-purple in inverse relative

32. Gillis *et al*. 1995.

percentages. The relation of yellow/gold–black/dark-- white/light is more or less the same for the two (Royal Tomb and all ChTs) and even as compared with Asine.

As for Berbati, as seen in Fig. 3c, the first thing that strikes one is the high percentage of black/dark hues. Black/dark is predominant here, comprising roughly 30% of the total, due primarily to the relatively large amount of dark, conical steatite spindle whorls/conuli: one or more shiny, black or dark steatite conical spindle whorls were found in quite many of the registered tombs, including the tholos tomb. Excluding untinned pottery, skeletal material, and unregistrable objects, the seven Berbati ChTs had only 73 objects registered in total by hue (i.e., 'Holmberg's' ChT had just 33 items total and the tholos tomb, a mere 21 objects -- these two graves were probably plundered, although this is not mentioned in the publications): compare this to the five Asine ChTs that together had over 400 objects. The high percentage of objects with a yellow/gold hue in Holmberg's ChT is due largely to the proportionately large number of tinned vessels.[33] On the other hand, the ChTs had 8 of 10 hues, and although often represented by only one or a handful of items, all the possible hues are represented here among the three locations with the exception of green. Of note is also that the Berbati ChTs have on average 10 objects in each, while the Dendra ones had 20+ and the Asine tombs, an amazing 70+ items in each, excluding pottery in all cases except for the tin-covered vessels.

Looking at the comparison of locations by hue and percent (Fig. 3d), we get a clearer picture of both the similarities and the differences between sites and between locations within the sites. Generally speaking, both of the Dendra contexts and the ChTs from Asine resemble each other; as seen above, Berbati on the other hand shows differences both intra- and intersite: the predominance of black/dark at Berbati, for example, is greatly at variance with the other two sites, as is the relatively large amount of (greenish, bluish) gray. The two different locations at Dendra, one a collection of ChTs, the other an amazingly rich tholos tomb considered by the excavator as the final resting place for three members of an elite and/or ruling family, are still similar to each other regarding choice and relative amounts of hue. If we look at the large aggregate of chamber tombs from the three sites, leaving out the Royal Tomb, Holmberg's Chamber Tomb and the Berbati tholos tomb, there is a degree of similarity, but regarding the proportions of the most represented hues, yellow – black – white it is clear that even here there are fairly large differences, especially between Berbati (with its great proportion of black/dark and inversely small percentage of yellow/gold) and the other two sites, whose predominant hue is yellow/gold. The relatively large amount of gray in the Dendra tombs and even the Berbati ones in proportion to the other 'lesser' hues' is also of interest: at Berbati

33. Berbati – Holmberg 1983, 49.

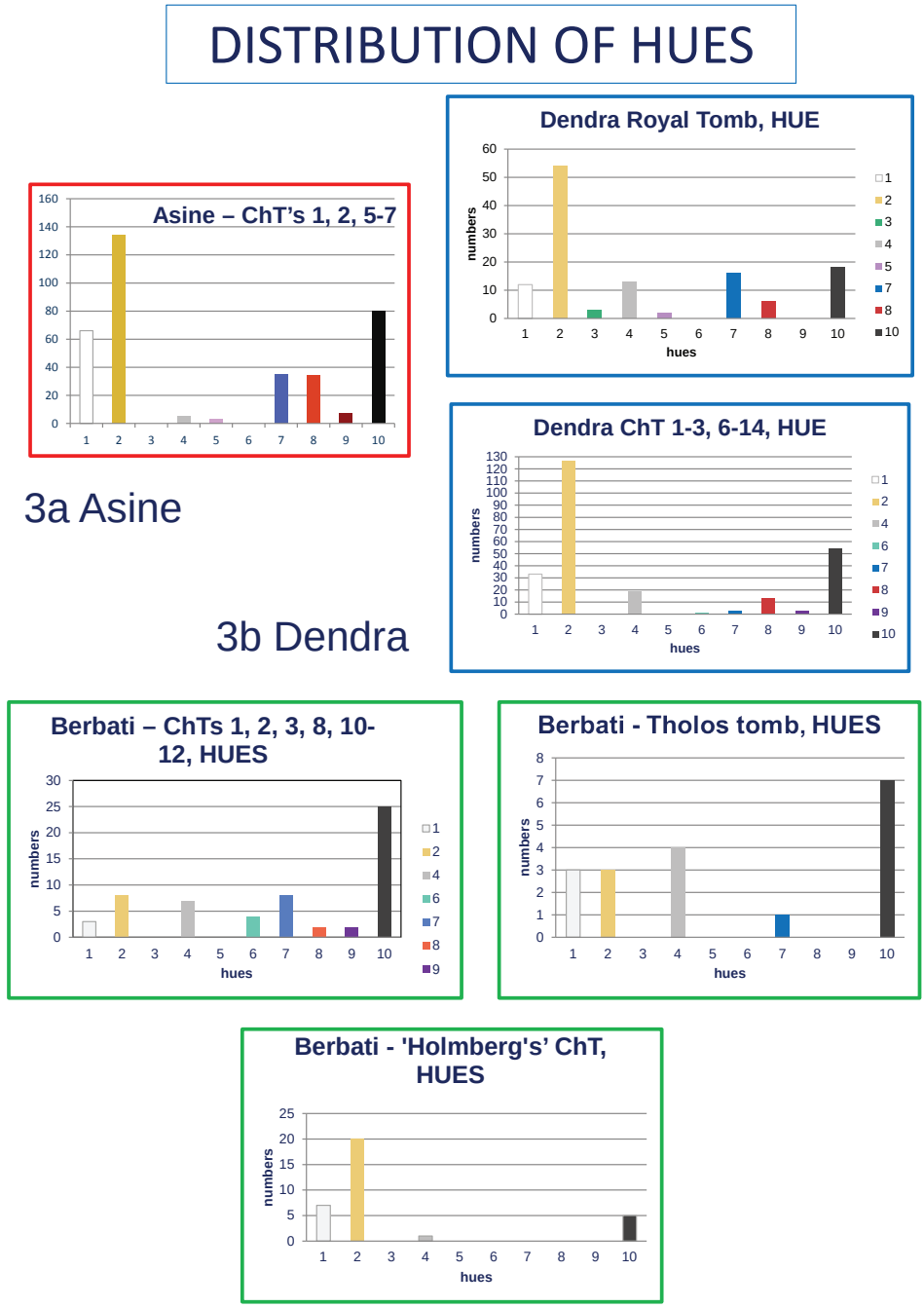
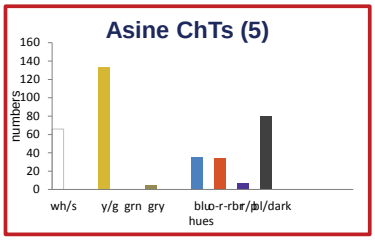
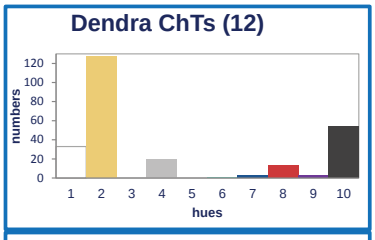
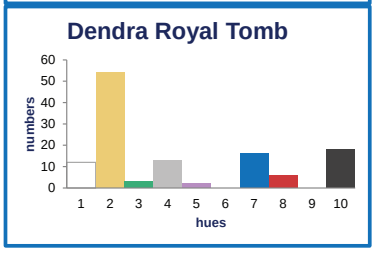


Fig. 3: *Bar graphs showing the distribution of hues: 3a for Asine, 3b for Dendra (two burial areas), 3c for Berbati (three burial areas), 3d showing all sites/areas in the same figure, and 3e showing the distribution by site and finally, all together.*

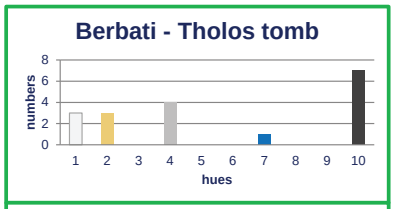


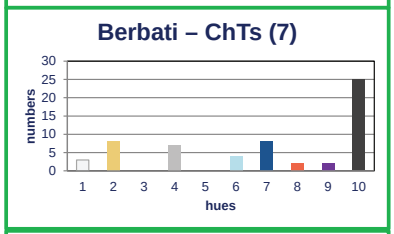


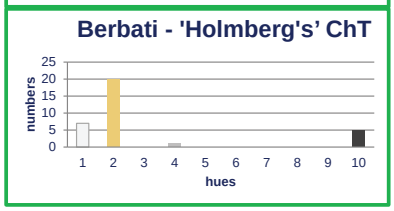


1=wh
2=y/g
3=grn
4=gry
5=viol
6=tu
7=bl
8=r/r-b
9=pur
10=blk

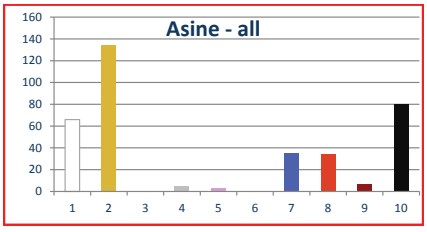
A=364
DChT=253
DRT=124
BChT=73
BH's=33
BTh=18

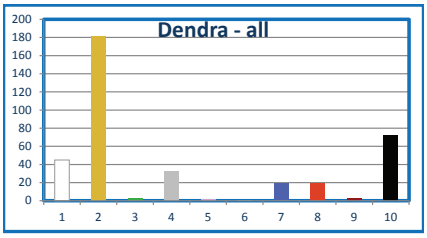


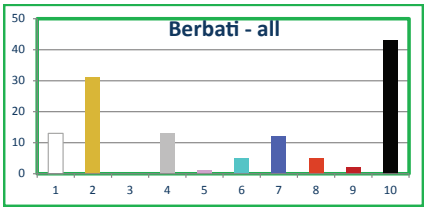


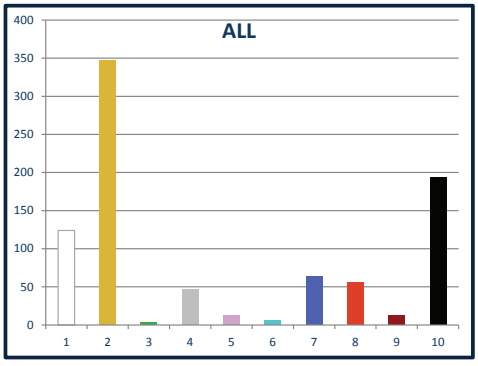


3d Distribution of HUES









3e Hue distribution per site and all together

this is due to a mixture of materials—lead, flint, and a large whetstone, while at Dendra, several of the tombs had bluish- or greenish- or light gray, shanked, matte spindle whorls. A composite view of the hue distribution is seen in Fig. 3e, which shows the distribution by site and the total for the three sites all together.

Thus, although we saw above that there were variations from site to site, and even within sites, it seems evident as well that yellow/gold is by far the most dominant hue: of a total of 868 registered, 347 or *c.* 40% were yellow/gold, followed by black/dark (22.5% or 195) and white/light (124 or 14%) (Fig. 6). The inclusion of deliberately burnt (blackened) pieces of agate and amber reinforces the possible importance of black/dark. The other categorized hues are all represented in modest proportions. The occurrence of commonplace objects like black steatite spindle whorls and local, low- or non-status objects such as flint, whetstones, pebbles, and matte, grayish clay spindle whorls in high-status graves could have been placed there for their hues. Even leaving leeway for missing items, subjective calls or arbitrary judgments, the results of the analyses would seem to indicate that aspects of shine and certain hues had significance in burials and beliefs.

Value

Regarding value, shininess or matte-ness, almost every find was shiny, or at least reflective, glowing (Fig. 4). This is most evident at Asine, where 397 objects of 405 registered for value were shiny, reflective, polished, or glowing, as opposed to 8 dull objects – flint, (deliberately) burnt agate and burnt amber, lead, animal bones.[34] Shiny, reflective objects must have been extremely important. At Dendra, of 408 total registered values, 391 had high or medium value, while only 17 were matte. The proportions of shiny:matte, *c.* 23-25:1, were only slightly lower than at Asine (*c.* 25:1). At Berbati, 'Holmberg's' ChT has *c.* 32:1 (in part because of the high number of tin-covered vessels), the ChTs have *c.*8.5:1, and the Tholos Tomb has a much lower percentage, 3:1.

Despite whether viewed individually by locus, by settlement or all three sites together (Fig. 5), there can be no question that the shiny, bright or light-reflective value component, i.e., high or positive value, would seem to be far more important than the other, low-value, matte end. Of the 889 objects in total registered for 'value', only 40 – or around 4% - were not shiny or reflective. One could ask what alternatives there were. This is a more difficult question, but some alternatives did

34. The differences in the number of objects registered by hue in relation to value is due to the fact as discussed above that various factors made the registration of the one or the other aspect difficult: variegation or type-variety in hue, or missing items which could have been either shiny or matte.

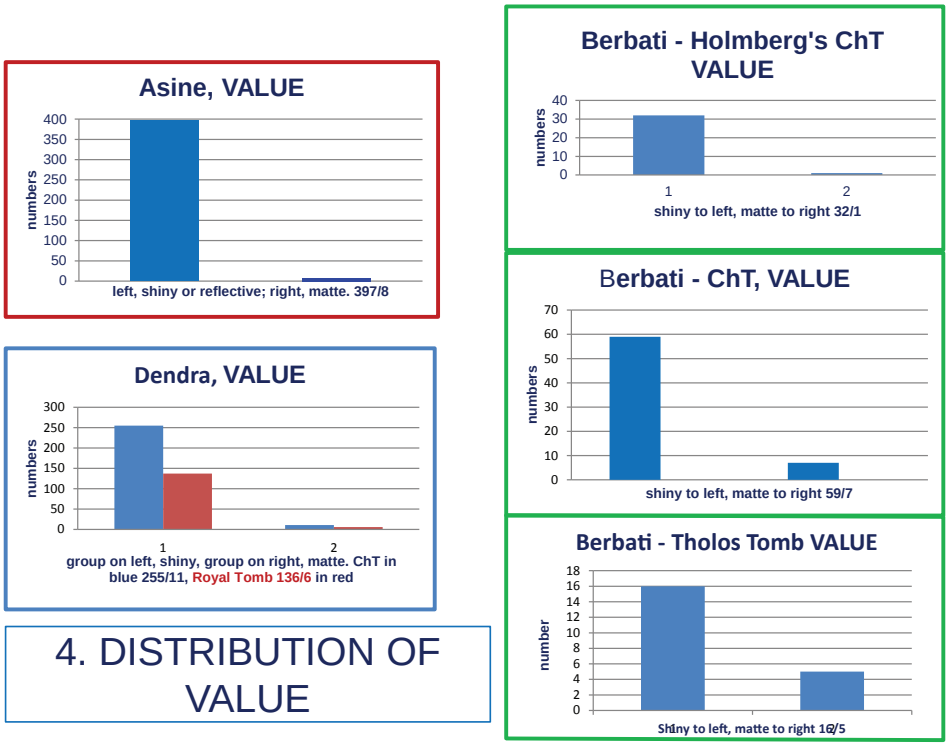


Fig. 4: *Bar graphs showing the distribution of value (shine) for the sites/areas.*

exist: for example, unpolished horn or bone could have been used. Steatite spindle whorls did not have to be polished. Special burial ceramics or more decorated (or plainware) vessels, untinned, could have served the same purpose. In fact, tin covering of ceramics found only in burial contexts, as stated previously, must have served a special purpose, and shine comes instantly to mind. One must conclude that high value seems to be an extremely important factor in burials and beliefs.

Thus, looking (Fig. 5) at the two analyzed components, hue and value, it appears clear that apart from any socio-economic aspects, there were certain general elements important in these burials: the aspect of value (shininess, reflectivity, glow) seems to be of prime importance, to the extent that normal (even monochromed and decorated) pottery, normally matte or sometimes partly shiny, was covered with glued-on, thin strips of shiny tin foil. Certain hues were predominant, while the majority, although present, were notable by their low numbers. Even leaving leeway for missing items, subjective calls or arbitrary judgments, the results of the analyses show without doubt that aspects of shine and certain hues had significance in these burials and beliefs.



Fig. 5: *Total distribution for value (shine) and for hue.*

Symbolism, materiality and color

It seems fairly clear that there was symbolic value behind the gifts chosen.[35] For symbols to express something, to mean something other than the face value of the object, a tacit and explicit understanding of the symbol and its meaning needs to exist: thus most symbols are culturally determined.[36] Even the briefest look through some of the literature on symbolism reveals, not surprisingly, many

35. Let me give a simple definition of my use of the word here: a symbol is something (an object, a word, a drawing, an action, etc.) that represents or stands for something else, especially a material object representing something abstract. As an example, a red rose is a flower but is also a symbol for love in certain cultures and times; a round, red light at an intersection means 'stop'; a dolphin on a coin in ancient Greece was symbolic for the island of Delphi.

36. 'Human cultures use symbols as a means to express their specific ideology, social structures, and to represent characteristics of their specific culture. Thus, symbols carry different meaning depending upon one's cultural background. The meaning of a symbol is not inherent in the symbol itself, but is culturally learned.' (thefreedictionary.com, citing Womack, M. 2005. Accessed spring 2014. *Symbols and Meaning: A Concise Introduction.* California. '… its explicit forms [of symbolism] are unintelligible by themselves and their study has always presupposed the existence of an underlying tacit knowledge.' Sperber 1974 (English version 1975), *Rethinking Symbolism*, Cambridge, xi.

different approaches, understandings and applications. Robb has discussed, surveyed and critiqued the various theories and collected them into three prevalent (and opposing) directions.[37] In the following analysis one of these directions is applicable and will be used: the 'token' view, the meeting of idea and material, of transmitter and receiver, and the interaction between them in an established social context, whether it be personal, local, regional or global.

Looking at the tombs studied here, we can see many different levels of explicit symbolism at work: the grave architecture in itself is a statement of knowledge, power and status. Going on to the gifts, one natural question is what motivated the choice. Perhaps much was prescribed, but it appears that families could freely choose some of its their grave gifts (judging at least by the differences in the goods from family tomb to family tomb at Asine[38] and the differences in grave gifts between sites like Berbati and Asine for chamber tombs. above. Assumedly religious rites and paraphernalia were important and standardized, although I have no concrete proof for this or for evidence of it in the grave gifts: it can perhaps be assumed that certain specific actions, objects and acts were necessary ingredients in religious expression. Another clear motivation must have been socio-economic: the family's desire to demonstrate its actual or aspired wealth, status and power. This was done in many well-known ways: the large amounts of goods - rare stones, metals, imported luxury goods and rare materials; the materials themselves (here would be for example metals, especially gold, probably fine-woven textiles, imported spices, and so on; the workmanship and technologies (e.g., making tin sheeting and applying it to pottery); the ratio of luxury items (as opposed to practical ones, such as spindle whorls and whetstones); the family's means of obtaining goods from afar through their knowledge of distant societies, technologies and products.[39]

37. Robb 1998. He divides the current theories on symbolism and their opponents into three large groups, which he calls symbolism, as 'tokens': message-bearers, transmitter of information, material signifiers (often socio- political messages); as 'girders': the supports creating and structuring the mental and social world, thought processes, ideal meanings; and as 'tesserae': a shifting momentary interaction between idea and material, completely arbitrary in the way they are put together.
38. Gillis 2013, 83-85.
39. See, for example, Mary Helms' classic work (1988), where she says on p. 4, 'Not only exotic materials but also intangible knowledge of distant realms and regions can be politically valuable "goods"…. .' both for those traveling, and those at home '…who are able to acquire such knowledge [and of course the goods] by indirect means and use it for political advantage.' A rare metal such as tin is one of these goods. Broodbank (1993, 324) in talking about the Early Cycladic relation to imported metal says that its value '…lay not just in its properties but also in its exotic and invisible origins; … .' To this, I would like to add technological knowledge, or rather, the access to those possessing such knowledge, who for example could produce tin sheeting like the tin foil for the tin-covered vessels, ranking among the difficult and rare technologies.

The funerary display allowed them to maintain their place in the ranks of the upper echelons of the society through this display. Thus the tomb itself and its contents (via amounts, materials, manufacture, import, social factors and so on) are clear symbols of power and prestige, created, read and understood by all.

Symbolism in color

Looking above at all the socio-economic symbols, we realize that there is one aspect of the gifts having potential symbolism that is seldom mentioned – color: hue and shine. The first question is whether there was intentionality in their choice; secondly, were the colors symbolic, and thirdly, was any symbolism explicit, i.e., conforming to certain cultural interpretations and connections. Regarding the first question, there can be little doubt of intentionality here: deliberate, conscious choice indicating intent, idea or purpose. Shine and certain hues in particular had significance – or at least great precedence - in burial rituals and beliefs, as seen in the results above, prescribed or representing personal preference. Regarding the second and third questions - were they symbolic, and if so, can we say anything about what they symbolized – are much more difficult to determine without written sources to help us.[40]

A quick definition of color symbolism is that a hue or even shine, with its various properties, is message bearing and transmits messages or emotions be they explicit or subconscious, evoking a particular response, understanding or feeling in the viewer. There is often clear intent and no ambiguity: if such symbolism exists, the transmitter (in this study, the Perssons selecting the grave goods or the objects themselves) sends a message through hue and value and the receiver(s) (the viewer of these color aspects) is clear about and shares the meaning of these direct and unequivocal symbols.[41] An example – a bright, canary yellow is usually thought of as cheerful. Some hues are considered 'warm', others, 'cold'. It is no coincidence that bedrooms and classrooms for children now-a-days are often painted in soft, warm, light, pastel hues. These symbols are intentional, deliberate and explicit in the society in which they are used, and the same message is (usually) received as was sent. If we are not a part of this society, we do not necessarily understand either the symbols or the meaning.

40. An understanding of these pan-societal messages can be gained through written sources and critical examination of the evidence ('exegeses', to use Turner's (1967, 50-52) term for understanding the meanings of symbols.

41. Example: red roses meaning 'I love you', pink or blue for newborns to identify boy or girl, black in the Western world and white in the East today for mourning. Shiny hair is good, dull hair, less so, the shiny halo around Jesus, the saints and other holy persons

Did this 'intentional' color system exist in the Aegean Late Bronze Age? Possibly, but we do not have the literature to support this.[42] But if we do not have information -- first-hand communication -- but only the objects with their colors? Can we then extrapolate or make analogies with those contemporary or comparable societies that did have color symbolism[43] as to the meaning of these symbols in the LBA? This is doubtful. The message transmitter exists but the receiver is down. The message can have clear intent, or be more personal for the transmitter/user, as in expressionist art where it is not always clear what meaning the hues had for the artist (e.g., purple sky, green skin – assuming they had meaning for his/her).

The answers to the second and third questions above must be that at least some of the hues and especially the shine seem to have been special (the extreme emphasis on shine and on yellow, black and white) in the funerary setting, but there is no way to determine today what they may have meant 3000-odd years ago to the LBA Mycenaeans.

Another kind of meaning through color could be called something like 'unintended symbolism', where the message transmitted is not deliberate or even conscious, and the receiver may not be actively aware of having gotten it, but still reacts It is in this sphere that materiality and agency come in, where a even non-sentient being or object can send out a message. This will be taken up more fully below.

Materiality, agency and affordances

Materiality theory is based on the idea that the material culture takes an active place in the world, with 'active' the key word.[44] There is great complexity and

42. In Linear B, there are very few hue terms (e.g., Gillis 2004; Gillis 2013, n. 11; *contra* Blakolmer, e.g., 2004: 63 and table 1, who finds 39) and no use more than as adjectival descriptions is recorded.

43. Pharaonic Egypt, known through texts (e.g., Baines 1985; for more references, see Gillis1999, 289-90, and n. 5; 2004, n. 4, and n. 5 for Anatolia). In the New World, documented by Spanish colonists and monks in the 16th *c.* AD: Mexico (e.g., Hosler 1994), Central Andes (e.g., Lechtman 1988) and Peru (e.g., Shimada 1997) – for references for them, see Gillis 1999:294-297 and n. 24-37; 2004, 56-57 and n. 3.

44. For a deeper understanding of materiality and agency for objects, see, e.g., two volumes devoted to materiality, DeMarrais , eds., 2004 and Maran, eds., 2012; plus many articles, for example, Bird-Davis 1999, especially 69-71, Renfrew 2004, 23; Gosden 2004, 33; Herva 2006a and b; Johannsen 2012; Hahn 2012; to name a few. Bouvin 2004, 64 sums it up well, 'We need to return to the material world. …[a] holistic approach that recognizes that material culture is not a product of human history, but an integral part of the human story.'

diversity in the various uses and interpretations of materiality. In the following I will not espouse the one or the other theory or interpretation, but will try to implement materiality and agency in aspects of color, including both human and material agents in a two-way discourse in an attempt to understand the 'unintended symbolism' mentioned above.

The theory of materiality grew as a reaction to the belief in rationality and the thinking man as the ruler of his world, with a basic preference for mind over matter, subject over object, rationality over emotion, culture over nature and male over female.[45] This belief that the human is rational and logical and everything can be explained through rationality is rejected by most scholars today both for its clear bias and for its completely anthropocentric nature: a more encompassing theory is the concept of materiality.[46] The understanding that material culture has its own 'life' can range from a belief in total animism[47] to a world where non-human objects lack cognition and intentionality, but can 'communicate' as agents. In this idea of the world, everything is intermingling, flowing in and out, in flux, creating new actions and reactions in the dynamics of relationality, the entanglement of material, agents and senses.[48]

If we can accept that the world is fluid, not fixed, a kind of constantly changing meshwork, then we can also accept that all the participants in it - not only people but even objects - can interact and cause things to happen – '…objects by their very nature of connection with humans quickly shift from being mediators to being intermediates.'[49] These 'intermediaries' are usually called *agents*, or in Latour's term, actors.[50] Agents can be primary or secondary. These agents are, quite simply, someone/thing that leads to or causes someone/thing to happen/change/react: they have *agency*.

45. Although this thinking was '...intellectually rooted in classical antiquity and Christianity,' Kopytoff 1986, 84.
46. See, for example, Malafouris 2004:53, who makes, 'The general call for non-dichotomous thinking in archaeology… .'
47. The belief that humans are just one part of the greater realm of existence with everything having a life force For example, Ingold 2006: in animism '… beings (of all types, human and non-human) are constantly being generated, a world of becoming rather than being,' p.13; Bird-Davis 1999; Harvey 2006, xi-xii, 122-127.
48. Described as a state of constant interaction and constant flux, called different things but meaning the same: meshworks (Ingold 2006); engagement (Renfrew 2004); node, conglomerate (Latour 2005, 44, 65); entanglement (of interactions) (Hodder 2005, Latour 2005, 44). The idea of constant flux and changeability in relationality is seen also in Gibson (1986/1979).
49. Latour 2005, 79.
50. Latour 2005.

Agency implies relationality, intercommunication, the 'meshworks' mentioned above. Agency can be seen as a type of dialogue development (also non-verbal) in which the objects become agents that can trigger or influence our actions[51] or vice-versa. Many scholars dealing with agency differentiate anthropocentrically between human agents and non-human agents often speak of intentionality, while others believe that inanimate objects as well as humans possess agency: '… the proposition that *agency* is not simply a property of humans but equally, or instead, something distributed across humans (and other animate beings) and, crucially, inanimate objects, structures, substances etc. A concept … synonymous with *causation.*'[52] Agency contains at least two fundamental and inseparable phenomena: materiality and social reproduction,[53] or 'being generative', in Maran and Stockhammar's terms:[54] thus, material objects have agency and can cause a reaction.

An example of agent/agency: it's cold here—I will make a fire and get warm. I strike a match ('I' am the agent, the action or agency is the striking of the match). The match ignites the paper and kindling in the fireplace and becomes an agent (a part of the meshwork) - action and reaction, while the fire, the result of this 'double action', reacts by being a fire, which subsequently gives off heat, inducing feelings of warmth, contentment and comfort in me, and is thus also an agent.[55] Another example, Gell's classic case of the Trobriand Islanders and their canoes, illustrates this well—the sight of the terrifying demons carved on the prow-boards of the war canoes pulling up on the sands of a neighboring island, vessels full of people having access to magic which allowed them to create these boards, and the meaning (and invasion) of these menacing monsters effected a state of total panic in the recipients, the locals, thus making them easy prey. [56] These carvings become actors, agents with agency.

There are extremes in the concept of agency - Gibson has a theory on '*affordances'*, which may be relevant in the analysis of the grave material in the

51. Maran and Stockhammar 2012.
52. Johannsen 2012, 316.
53. Dobres and Robb 2005, 162.
54. Maran and Stockhammar 2012, 2.
55. According to Gosden (2005) objects can affect people (be agents) in four different ways: 1. through form – morphology, decoration, color 2. genealogy, also known as the cultural biography of things 3. source of the object 4. effect, sensory. The fire example above illustrates his fourth way, perhaps the most representative, but his first way is equally relevant to this study.
56. Gell 1992; the theory behind his ideas, Gell 1998.

Aegean LBA below.[57] According to Gibson, an affordance is what something, an object, affords (=gives, provides, allows, causes, creates). In other words, a fire affords heat, light, injury, comfort, pain, burning. The objects afford things regardless of a recipient: the match affords a way to ignite the paper (whether or not there is any paper around), fire affords heat whether or not there is anyone nearby getting warm. The old riddle about whether a tree falling in an empty forest makes any noise is solved. The 'affordances of objects' means that function exists in the object itself, not in our interpretation or evaluation, and that objects can be object agents.

A modified, 'post-Gibsonian' view, and one more relevant here, has been presented by Knappett who modified Gibson by adding the interaction between affordances and cognition – an object can afford things but these affordances are not universal or absolute: understanding is also needed.[58] He calls it situational cognition. An example – a dark, gaping hole affords a place to put things into. However, it is human understanding which connects this whole to a death, a grave and an interment. The human viewer adds his cultural experience and understanding to arrive at burial, sorrow, feasting, loss: thus, the relationality of material and cognition. The black hole affords putting something into it, but the situational cognition – understanding the context - adds thoughts and associations, memories, emotions – it is an active agent, but works together with the humans, who are also active agents: they understand the affordance of the hole/tomb and receiving this action, react/act by putting the deceased and the other objects into the tomb, grieving, and so on. The same object can afford different behaviors at different times and for different receivers: a cup might afford grasping and drinking for a human and possibly an ape, but not for a new-born or a spider. The human might pick up the cup, but the infant could lick it, or kick it over.[59]

Color and materiality

Was there a symbolic meaning in the use of shine and hues in the LBA Argolid burial ritual apart from any socio-economic and political message? As discussed above, in my opinion there can be little doubt that they had importance at the three sites and probably had specific meanings and symbolisms, but we have no way of knowing for certain. Was there materiality and agency, message intercommunication between the human and the material: that is, can we determine

57. Gibson 1986/1979, mentioned above regarding color definition, and his Ch. 8.

58. Knappett 2004, 45.

59. Withagen and Chemero 2012.

whether the objects through their materiality communicated a meaning of their own apart from or in addition to any meaning intended by persons?

Let us now see whether we can tie together the analyses of hues and values with the ideas of symbolism and of materiality and agency. In the following I shall examine the role hue and shine may have had in burials, seen through a filter of materiality theory, and refrain from suggestions of interpretations and color symbolism, although tempting, in favor of concentrating on what the material evidence says.

Value

The shininess or reflection of the objects and materials seems to have been the most important color aspect of burial gifts, with 96% of all gifts shiny or reflective. Shine is not just a mute attribute of an object but can have agency and affordance as well. The reflectance of a shiny surface (for example, a tinned vase) can light up things and areas around it. It has an affordance, it can give off light. Even in the black of the grave, the affordance of giving off light and sparkle still exists, if one follows Gibson's views (see above) – perhaps shining in the next world and illuminating the way for the deceased. In a (hypothetical, to be sure) funerary procession from the settlement to the semi-dark dromos and finally into the very dark tomb (see below), it is tempting to see material messages communicated to the viewers: the flash and spark of sun striking the golden rosettes of the shroud,[60] the shimmering of light reflecting from polished stone or ivory, the dappling of the firelight in the dromos on the walls, the grave goods and the faces of the people assembled there as the shine of life flickers and gradually fades into the dark of death. The light becomes dulled and dampened through the dimness in the dromos, only to disappear in the dark of the tomb – another, but quite obvious message. This materiality and agency of the objects – their initial shininess, their indistinct and subdued qualities in the dromos and their imminent imperceptibility in the tomb – communicate, enable cognitive associations (Knappett's situational cognition), and heighten the emotions as the burial goes on (various emotions and senses are or can be affected through some aspects of the materiality in the burial ritual).[61] To be sure, temptation is not reality but this material message does seem to be a strong possibility. Indeed, the thought has occurred to me that as the dromos itself can be considered an agent with its interplay of light and dark (as befits a liminal area in a burial ritual) and

60. For example, Dendra - Persson 1942, pl. XXVII.

61. See for example Malafouris 2012,79; Morris 2004,36; Hurcombe 2007; Gosden 2004, 2005, 202; Robb 2010, 511, Herva 2006a and b.

its narrow shape, its initial architectural conception was created expressly to suit this purpose - a fitting setting for liminality in burial ritual.

Hue

There can be little question that certain hues were important in burial contexts, at least as seen in this study. Despite internal differences between the sites (Figs. 3d, 3e), the hues which predominate are yellow/gold and black/dark. This is seen not only statistically and numerically but even in the larger numbers of different materials used for these three hue categories as compared with the other seven, as seen in the table (see above, indicated by the numbers in parentheses for the categories). Of further interest is that some hues are almost non-existent (see Fig. 6): for example, there are only three green objects, sealstones from the Royal Tomb, out of almost 900.[62] Thus, it would seem that certain hues (regardless of their materials) were included in large numbers, while others are surprising in their almost total exclusion. We must conclude that the choice of hue was intentional and meaningful and the sensory impact of the objects seems to have been an important aspect in the inclusion of the grave goods.

The large proportion of black/dark objects could easily represent the occasion—the blackness of the gaping hole at the end of the dromos, the blackness of the tomb when it is sealed. This could explain why there are so many black objects. The black steatite spindle whorl seems almost ubiquitous in grave contexts.[63] As for the yellow/gold – it obviously has great significance and most probably symbolism, but it is not certain what that significance and symbolism were.

Other hues seem to have had other roles and other associations. Take the example of sealstones. At some point during the burial ceremonies, perhaps during the procession, almost certainly in the dromos, the grave gifts would have been on view. Chapman wrote (in discussing Varna and Durankulak) that the aim of the hues or combinations of them in grave contexts was to facilitate non-verbal [material] communication, about green fields and brown mountains,

62. Once again we must remember that much of the faience, which comes in all the hues, is little more than grayish crumble today, and much is missing. Green could also have been represented by living flowers and plants, textiles, or other perishables, as even the other hues, of course. While this could lessen the imbalance somewhat, I do not believe it would make a significant difference.

63. Spindle whorls of steatite are also found in settlement contexts, but whorls are also of plain, undecorated clay. This is the case for i.a. Asine, Dendra and Berbati (Eva Andersson, pers. comm.).

Hue		wh/s	y/g	grn	gry	lilac	turq	blue	o-r-rbr	r/p	bl/drk
Berbati											
Chamber tombs		3	8		8	1	4	11	5	2	31
Holmberg's ChT		7	20		1						5
Tholos tomb		3	4		5		1	1			7
Total	127	13	32		14	1	5	12	5	2	43
Dendra											
Chamber tombs		33	127		19		1	3	13	3	54
Royal tomb		12	54	3	13	2		16	6		18
Total	377	45	181	3	32	2	1	19	19	3	72
Asine											
Total	364	66	134		5	3		35	34	7	80
All Hue	868	124	347	3	51	6	6	66	58	12	195
		14%	40%	0.35%	6%	0.7%	0.7%	7.5%	6.7%	1.4%	22.5%

Fig. 6: *Chart showing numeric distribution by hue and site.*

for example.[64] Shapland, in studying sealstones, found that clear/green/blue sealstones have a high percentage of marine animal depictions (81%) and '.. seem to be reinforcing a link with water, while other colors can be associated perhaps with land.'[65] The viewer, seeing these objects, might unconsciously associate the deceased with the land, or with water, through cognitive association. Even if they were put in as grave gifts by a person (acting as an agent), they were agents in their own right, communicating the message of land, sea, ownership, marine life, and so on by their hue.

The motifs carved into the sealstones are usually too small to see except from very close up. These engravings in a much more literal way tell their stories of the brave bulls, wild lions, calm agrimis and marine life that formed a part of the world in which they all lived, reinforcing the background hues of their natural habitats. The choice of gem hue could have been influenced by whether the deceased and his family derived their status and power from land or sea. The choice of motif could strengthen but also qualify this connection: thus, the land-owning deceased could be associated with browns and greens, while the motif could have symbolized his or her position - a ruler, a hunter, a warrior on land in addition to the general expression of wealth and power. The blues and sea greens

64. Chapman 2002, 67.

65. Shapland 2009, especially 118 and figs. 6 and 7.

would work in the same way, with the motifs acting as qualifiers. In this way, both the hue and the motif (in the same hue) would be agents communicating a message to the recipient: the general hues indicative of the deceased's power base and acting as a sensory, unintended agent, and the motif clarifying it, acting as an explicit, intentional agent. The fact that these carved motifs are often very difficult to see even holding the gemstone close to one's eyes (personal observation) is even more indication of their agency, being message transmitter, with or without a receiver. Even those who did not know the deceased that well could understand the family background and position from the message they received through the (sensory) agency of the hues.

This connection of hue and agency can be suggested in the material studied here. From Asine there were four sealstones, all from ChT I:1; a 'dark agate' (probably brown or grey?)[66] engraved with two bulls; a red carnelian with a calf; a 'grey' stone with two bulls and another 'grey' one with a bull on his hind legs and a man behind him.[67] From the Dendra ChTs there are seven: a large carnelian carved with an antelope and another also of carnelian showing a bull from ChT II and one from ChT III, also of carnelian, with an antelope.[68] Further, from tomb VI a 'brownish agate' with a sheep or goat.[69] From ChT VIII a orange-brown agate, with a bull and an attacking lion (p. 48), and two from tomb X - a 'mottled agate', three-sided prism seal with two agrimis and a lion on one face and a lion and an agrimi on the second face,[70] and for the second , a 'light agate' probably recarved with a boar seemingly overlying an earlier bull figure plus a lion.[71] From the Royal Tomb, there were eight in all: six in a cup by the 'king': a 'dark agate' with lion and bull plus agrimi; two of 'light agate' with a lion and a bull; three of jadeite,[72] showing two goats, a goat with background vegetation including a palm tree, and a lion, respectively.[73] The 'queen' had one stone on her wrist, a red

66. As seen in CAMEO 2013, http://cameo.mfa.org/wiki/Agate last accessed spring 2013, agate comes in a wide variety of hues and is always banded. I believe that if these agates had been red or blue or green, they would have noted this. I am guessing that these hues are fairly neutral—light neutral or dark neutral.
67. Asine – Frödin and Persson, 1939, 373-4, fig. 242.
68. Dendra – Persson 1931, 80, 90,106 (52), pl. XXXIX: 4 left, for the antelope.
69. Dendra -- Persson 1942, 27(18), fig. 31.
70. Dendra -- Persson 1942, 81-83, pl. VII:2, and 83-84, pl. VII:3, respectively.
71. Dendra -- Persson 1942, 32, 57, XIX, 124.
72. http://cameo.mfa.org/wiki/Jadeite. Can be grass- or emerald-green, but also purple, blue, gray, black, white, red, pink, and orange. Last accessed spring 2013
73. Dendra – Persson 1931, 32, 57, 124, pl. XIX.

carnelian with two bulls.[74] One made of lapis lazuli depicting two bulls was found on the floor of the chamber[75] for a total of 15. Of these, all except for the one lapis lazuli and possibly the three jadeite ones had a red or red-brown, a brownish/ green or gray-green hue and all had land animal motifs. Of interest of course are the lions and bulls associated with the 'king' and 'queen' as well as the majority of domestic animals on the jadeites. No blue (except for the lapis) or sea-green stones, no marine motifs.[76] Thus, though a small sample, these sealstones seem to corroborate Shapland's observations and Chapman's idea of non-verbal agency: it seems possible that through the hue and motif, the sealstones communicated both general/ sensory and explicit messages of land ownership (the basis of economic wealth and power), perhaps of bravery and strength, maybe hunting. We can only guess at the connections to the deceased's family, background, position in life, activities, but it was surely a message received by all the viewers.

As for white/light, black/dark and yellow/gold, far and away the hues of choice, it is easy to put a great many interpretations and guesses on their symbolism and the material meanings, but as this would only be guesswork, it should be avoided.

Value and hue

As almost all the objects involved in the burial were shiny, not much can be said for any specific combination of value and hue. There is one negative example, however, which seems to transmit a message through its form, its material, its value and its hue. This involves spindle whorls/conuli: almost every grave in all the sites and locations studied here contained at least one shiny, dark, conical, steatite spindle whorl. One might think that these were put into the tomb by family members who wished the deceased (probably a woman, but not necessarily) being buried to have them in her next life, a reasonable assumption. If that was the case, they would communicate womanly virtues such as spinning (and by association, weaving), providing for the family, possibly the shine of light but the black of the tomb: thus, a perfect grave gift — the right hue, the right value and the right message. However, in several ChTs from Dendra, there also appears in addition to the default dark steatite spindle whorls, another type, shanked, matte, light bluish- or greenish-gray stone spindle whorls: ChT I, 4 or 5 gray matte,

74. Dendra – Persson 1931, 38, 58, pl. XIX.

75. Dendra – Persson 1931, 29 (10), pl.-XXV:2.

76. Although in my opinion, green could as easily represent land occupations such as farming or land ownership. This seems to be the case as the motifs are all land animals, contrary to Shapland.

7 dark shiny;[77] ChT III, 2 and 7;[78] ChT VIII, 2 and 5 and ChT XIII, 5 and 10.[79] What to make of these? To be sure, they might have had no special significance and simply had been used to spin a much thinner thread by the same fine spinner-weavers –a sign of the deceased's status as expert spinners and perhaps weavers, as this type of whorl produces a much finer thread for very high quality cloth.[80] However, the fact that they are not shiny in a world of shine, and not yellow or black or white in a sea of yellow-black-white must have significance.

In two articles about buildings as persons, V-P. Herva says, 'The incorporation of artefacts into architecture transformed parts of the people associated with those artefacts into parts of building themselves, ….'[81] and 'The incorporation of objects into the structure of buildings would have infused architecture with whatever (relationally constituted) special properties the deposited things were considered to possess. … Houses … as a nexus of social life, deeply immersed in social relations. [They are] parts or extensions of the people who build and inhabit them.'[82] While the stones and buildings did not become people, obviously, they became infused with, or represented people. Although only a guess, the thought arose that these atypical spindle whorls (as understood by the viewers exactly because of their atypicality) were meant not to accompany dead expert female spinners and weavers into the next life but could represent real, living women — the (living) wife, mother or daughter of the deceased, buried symbolically with him/her to accompany him on his journey. Their oppositeness –instead of high value, low value (matte); instead of yellow-black, blue- or green-gray, a unique hue; instead of the usual conical form, just the inverse, a shanked, small-holed one - could have transmitted a message all its own - that these are different.

Global-local

This small study of burials in three settlements in a limited part of the Mycenaean region in the LBA shows, if not globalism, at least regional similarity in the manner of elite burials. The physical tomb architecture is the same (as it is for most elite Mycenaean burials): chamber tombs dug into a hill or a slope with a dromos and a stomion and the occasional tholos tomb, also with a dromos and a stomion.[83]

77. Dendra – Persson 1942, fig. 58.
78. Dendra – Persson 1942, fig. 62.
79. Åström 1977.
80. Andersson 2003.
81. Herva 2005, 224.
82. Herva 2010, 448.
83. RT Dendra *c.* 17 m. in length, Persson 1931, 19 and figs. 16, 20.

Regarding color, we find again certain trends in common – far more finds have medium-high than matte value. However, as is seen in Fig. 4, Asine and Dendra (both ChTs and the RT) are similar in having only 2% (Asine) – 4% (Dendra) low value, while the ChTs at Berbati have almost 12%. Regarding the hues, there is similarity in the top three hues, but differences in the placement of yellow/gold and black/dark between Berbati and the other two villages in the distribution, and in the Berbati ChTs, blue is as important as gold, with black three times as recurrent (see above, *The analysis results* and Fig. 3d). One could draw the conclusion that Berbati was a poorer village (less metals, gray whetstones and pebbles, far fewer objects per grave) but still following the main conventions of the culture as well as they could. At Asine, as mentioned above, it appears that there were differences in the types/categories of gifts from ChT to ChT, probably family graves with different profiles.[84] While there was somewhat more variety in the hues found at Berbati, there were many fewer objects in the graves and they seemed to be poorer.

The sample in this study is far too small to say anything about global (=Mycenaean) or local, but if I were to choose, I would say that signs point to globality rather than localness: a matter of variations on a theme, well larded with similarities in physical burial form — elites buried in costly chamber or tholos tombs – and in grave gift color. Berbati varies somewhat, but it is a question only of degree. The differences in color are more likely due to less metals in the graves (yellow and white) in Berbati, perhaps for socio-economic reasons, and the burial rituals were probably similar.

The burial as a drama of death in three acts

The drama of death and burial[85] – the procession from the settlement to the necropolis,[86] the ceremonies and actions in the liminal area (the dromos) between the settlement (this world) and the grave (the next), and the entrance via the stomion into the tomb which is then sealed can be seen as a drama in three

84. Gillis 2013, 83-85.

85. The following hypothetical scenario in three acts is based on three Argolid LBA sites, Asine, Berbati and Dendra, but is undoubtedly applicable to many others.

86. To see the relation between the settlement and the cemetery, see Asine – Frödin and Persson 1938, 295, 298ff; Styrenius 1998, 57,67, fig. 2, pls 1-3. Berbati – Säflund 1965,fig. 1; Schallin 1996,123-4, fig. 1, 125. Dendra – Persson 1942: 17, Figs. 18, 19; Åström 1977, Fig. 1 for topographical maps and photos.

acts.[87] Each act has its own plot, its own characters, its own associations, its own dynamics. The first act starts with a procession from the settlement or repository for the deceased to the burial ground. The deceased is most likely borne on a litter or transported in a cart together with the burial gifts and is wrapped in a white shroud (apart from any other reasons, linen is difficult to dye), with small, applied, stamped gold decorations - rosettes or other forms[88] - gleaming and flashing in the sunlight. The dancing lights from the reflections of the sun on the shiny objects on and next to the deceased seem almost alive and give the deceased's body the illusion of life in the sparkling light: life and light in death. All the dark objects (which were plentiful but usually small) accompanying the deceased on the litter perhaps also indicate that the ultimate goal of this procession is the dark grave and the eternal life after this one. Behind the deceased are the family, the friends, the village people. They are perhaps singing or chanting, accompanied by musical instruments as they temporarily leave their normal lives to enter into a liminal state, a transition between states.

The second act starts when the deceased, the other participants, the gifts and most likely ritual paraphernalia arrive at the dromos of the tomb. In this transitional area, partly in sun, partly in shade, some forms, details and colors are naturally subdued at times, in keeping with the passage from life to death (Fig. 7). Assumedly the participants are well aware of the liminality of the area, of being between two worlds, but the subtle shifts of light and dark, of hues, shine and even intensity as brightness fades and returns again enhance this awareness, as does the feeling of confinement in this narrow, coffin-like space. The gaping black hole at the end of the dromos serves as a constant reminder of the setting and the reason behind it. Subtle messages are thus transmitted and/or afforded by the material objects, the natural lighting and the setting. It is assumed that rituals

87. This tripartite division was first taken up in a book entitled *Les rites de passage* by Arnold van Gennep 1909 (first in English in 1960). He talks about '… rites of separation from a previous world, *preliminal rites*, those executed during the transitional stage *liminal (or threshold) rites*, and the ceremonies of incorporation into the new world *postliminal rites*,' from the English translation of 1977, 21. While these rites of passage are of course important for the deceased, going from this life to another state, they would also apply to the other participants in the rites, who go from an existence with a Persson to one without him/her. I thank Fredrik Ekengren for pointing out this source to me.

88. See, e.g., Dendra - Persson 1942, pl. XXVII.



Fig. 7: *Dromos of a chamber tomb from Asine, Necropolis I (photo: author)*

and ceremonies are held here, including eating and drinking.[89] Funerary feasting and ceremonies heighten '…bodily senses, feelings and emotions … In these sensory episodes bodily memory is generated…' involving sensory and bodily memory, '…important for identity formation.'[90] They are important factors in burials, reinforcing kinships and ties, traditions and memories. Thus, this area is a transitional phase between the present world and the coming one, guaranteed to heighten the senses, memories and emotions in all ways. Clearly, sensory stimuli are very important – the tastes of food from the ritual meals, the smells of cooking, the swirling smoke and the heat of the fire. Visually, the occasional flashes of sunlight, of *shine*, as the sun moves across the sky illuminating different parts of the dromos and the grave gifts awaiting deposition in the tomb, while other parts with their deep and narrow walls undoubtedly create an atmosphere of darkness and mystery. Perhaps even the various hues act as stimuli, as do the sounds of voices reverberating back and forth from the dromos walls, the reflections of light from the shroud and all the shiny objects for the deceased, the crashing of vessels being smashed, the presumably gaping black hole soon to be closed – all the senses are heightened.

These spatial, sensory and material properties, the 'scenery' in our drama depicted above, can be used in various contexts '…to facilitate perception by directing attention and offering … cues for action. Two obvious examples are size and colour… .'[91] 'Colour, brilliance, translucence … could have stimulated the senses,'[92] while 'sounds, smells and appearances, sight, movement' are important.[93] The importance of 'flavours, colours and smell' is discussed.[94] The total sensory experience in this, the middle act, would heighten the mystery of being in a special state.[95] An extra dimension is added by Turner, who sees ritual composed of two opposing but interconnected poles: that of social organization, morals, norms combining with the sensory pole of materiality, physicality,

89. E.g., 'a large number of stemmed goblets' in the stomion of ChT VII, Dendra (Dendra - Persson 1942, 32); '200 fragments of stemmed cups, or about 40 vessels' in the stomion of ChT 13 (Dendra – Åström, 72), 387 fragments of cooking vessels in the dromos of ChT 14, (Dendra - Åström, 112); 'Immediately in front of the blocking wall, … there was a layer of ash and charcoal extending for a few metres out into the dromos … obviously consists of the remains of a sacrifice … .' Dendra - Persson 1942: 53.
90. Hamilakis 2010 (2002): 20 in speaking of BA Crete.
91. Malafouris 2012: 79.
92. Morris 2004, 36; see also Hurcombe 2007 and her bibliography, 541-5.
93. Gosden 2005, 202, with four sensory effects, n. 18 above.
94. Robb 2010, 511.
95. See, e.g., Morris 2004; Gosden 2004; Herva 2006a and b.

emotions.[96] Whereas the hypothetical procession through the town would belong to the factual, social world with its norms and *comme il faut*'s, this middle act would turn more to emotions, materiality, the non-rational world of the senses. Rituals or ceremonies that were presumably performed here also added to the sense of other worldliness with their aura of performative and experiential participation. People reacted to and interacted with the transmitted messages and stimuli of light and darkness, of the natural and supernatural, and of the world around them contrasting with the black hole of the grave and the afterlife – all this inherent in and communicated by the occasion of the burial - the setting, the sensory input – and the presence of the deceased, who is simultaneously subject and object of the drama.

Having concluded the second act, it time for the passage into the third and final part. This last one begins by bringing the deceased and the gifts accompanying him into the tomb through the gateway separating the spheres, the stomion, and placing him (and them) in his final earthly resting place, probably with chanting or singing and the performance of rituals. There is evidence of fires in pits[97] inside the tombs or a hearth[98], though whether for fumigation, rituals, meals, or other purposes is not known. The gifts were arranged on and around the bodies (by someone — family? officials?), as seen in the Royal Tomb at Dendra, the only tomb studied here which was used within a narrow time span and contained few (three) and relatively undisturbed burials.[99] Questions concerning who entered the still-open tomb, what they did, and why must remain unanswered. It could be hypothesized however that officiants were the only living people involved in this transition from the liminal to the final. Only those with a kind of divine *laissez passer* could return from the world of the dead into the transitional space. In any case, this particular metaphysical passage ends with the physical sealing up of the stomion. It is probable that the breaking of goblets and plates occurred now: as seen above (note 27) vessels were often found smashed at the base of the sealed stomion. This might be perhaps to symbolize the final break with the deceased or to insure that no one would use these liminal vessels again. It is now that the final act begins, in which all the living participants leave the liminal area and return back to their lives in the world of the living and the deceased begins his new existence in the realm of the dead, whether in the tomb itself or transported to another sphere.

96. Turner 1967, 54

97. E.g. Dendra - Persson 1931, 18.

98. Dendra – Persson 1931, 80, for ChT 2.

99. Dendra - Persson 1931, 28, fig. 22.

This hypothetical 'drama of death in three acts' is based on an integration of several aspects: the material record, the use of shine and hue, the materiality and agency of the material objects in their contexts, and the importance of sensory impressions.

Final words

This study revolved around the colors of objects placed as grave gifts in the LBA chamber and tholos tombs at Asine, Berbati, and Dendra. The question was asked earlier whether the application of a theoretical foundation of materiality and agency could 1) offer broader interpretative possibilities for understanding displays of hue and shine rather than merely guessing what symbolism a certain hue might have had for the Mycenaeans and 2) add other dimensions beyond the conventional interpretations of anthropocentric manifestations of kinship, status and power in LBA Argolid burial contexts. The aim of the discussion of theories of symbolism, materiality, affordances, and so on was not to debate the virtues or flaws of the various theories, but merely to take up some theoretical frameworks that could be applied to the results of the analyses.

The results of the empirical studies of hue and value (shine) indicated they were important parts of the Mycenaean burial, at least in the three sites studied. In my opinion, it seems that as far as both hue and value are concerned, there was intentional, explicit symbolism in the choice of hue and in the overwhelming amount of shine/glow from the materials, totally apart from any display of family wealth, prestige and power through the gifts, their nature, their materials and even the burial itself. It is impossible to be able to identify the specific meanings in this symbolism, unfortunately, as one can do with literate societies: they could be connected with the burial ritual and the customs, or perhaps shared social beliefs. Applying aspects of materiality and agency vis-à-vis both inanimate and animate objects, as well as sensory perceptions, memory and emotion to these results can help us to recognize a new dimension, one of unintentional, perhaps even subconscious, symbolism and message transmission that could very well have heightened the intercommunication between the burial, the ritual and the participants. Thus, an awareness of the possible roles of both intentional and unintended color symbolism combined with the ideas of materiality and agency as discussed above can add an extra dimension to our understanding of Late Bronze age burials in the Argolid.

An attempt to illustrate this is seen in a hypothetical reconstruction of a (typical) chamber tomb or tholos burial. The funeral itself was divided into three (hypothetical) parts, the procession to the burial ground, the liminal stage in the dromos between this world and the next, and the third and final one, the

placement of the deceased and the gifts into the tomb and then sealing it. The values (shininess) and hues of the objects decreased from the initial stage of total brightness in the outdoors and the daylight through the intermittent, muted shine and hues in the liminal world of the dromos to total blackness as the deceased and the grave objects are placed in to tomb and the opening sealed off. Thus, kinship identification and socio-political status intertwined with the symbolism of the colors, emotions, sensory reception and memory,[100] facilitating and heightening the experiential response of the participants and implementing interactions and engagement between the human and material agents.

While naturally three sites in a small area of the eastern Peloponnese do not warrant any discussion of 'globality', the general similarities between three somewhat different but culturally related sites might indicate a general Mycenaean pattern of elite burial with small variations. Turned around, if one did not know anything about these three sites, one would easily be able to connect them all to the same culture, at least by observing the burial practices.

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100. Turner's (1967, 54) bipolarity requirement for ritual, social organization at one pole and emotion at the other.

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Weaving Identities - Local and global customs between Early Iron Age Italy and Greece

Christoph Kremer[1]

This contribution discusses the connectivity of the Mediterranean during the Early Iron Age. In contrast to already well explored tropes like the adoption of banquet equipment and warrior ideology as institutionalised forms of networks based on hospitality, the focus of will be laid upon the too looked overlooked role that women might have had in these. In this regard will selected object categories of the funerary assemblage from early Iron Age graves of females in Italy and the Eastern Mediterranean be discussed. Especially the wide distribution of parts of the female attire - in this case study faience bead necklaces - highlight the flow of objects and symbolisms connected to them in the Early Iron Age Mediterranean. This shared sign system is furthermore explored by a study of textile tools in part of these graves. These similarities in the funerary customs hint to a much deeper interaction between the two study areas beyond a mere trade of 'exotic' goods. In both region these objects expressed a part of a female identity. These identities are a connecting factor between the two regions, expressed in a local way.[1]

Introduction

The Mediterranean is often seen as a sphere of interaction between its different geographical regions. For the archaeology of the 1st millennium BC it is therefore no surprise that this interaction between different elite groups is a central topic. In particular, the spread of drinking habits and the diffusion of the banquet from the Eastern Mediterranean to Early Iron Age Italy has drawn significant scholarly

1. First of all I would like to thank the organisers of the workshop 'Global and Local. Perspectives on Mobility in the Eastern Mediterranean' for giving me the possibility to publish this article. It presents a short glimpse of my ongoing PhD project on textile production in Bronze Age Italy. I am very grateful to Constance von Rüden, Stefan Riedel and Sven Neidig for all the inspiring and encouraging discussions over the last years. Moreover I would like to thank them for their patience and critical thoughts during this creative process. Furthermore I would like to thank both anonymous reviewers for their thorough reading and their thoughtful and inspiring critique. For any mistakes I am solely responsible.

attention.[2] The nature of these exchanges is often thought of as different networks of hospitality, that linked diverse local communities. The deposition of drinking vessels, as well as pottery types related to feasting activity during a banquet, in Italian graves between the 10th and the 8th is seen as the adoption of a certain 'Eastern way of life'. These interconnections created something like a virtual community between the participating parties.[3] Other scholars speak of an 'elite ideology' of drinking and banqueting expressed by this specific burial custom and moreover by the supposedly 'richer' funerary assemblages during this time.[4] The common underlying idea of such an approach is the existence of exchange networks, linking various regions of the Mediterranean. Secondly, but more implicitly, the existence of a certain form of a common interregional identity negotiated through material culture can be drawn from this.

A certain weakness in this explanatory models is in my opinion, that they artificially homogenise the spread of certain objects and specific customs on a wider scale. This quite often overshadows the local component in the reception and incorporation of novelties and creates an asymmetry between these regions, reducing the receiving communities to mere absorbers. This cultural asymmetry has recently been challenged by authors either drawing on transcultural studies[5] or on input from postcolonial theories, including concepts of the third culture.[6] These theoretical concepts allows us to question the structuralist views of modern thinking, and to strengthen our understanding of the de-centralised local diversity of past social collectives[7] and to look at how people created their local identities within the discourse of a global context.[8] For the societies of the 10th to the 8th century BC of Greece, Crete, Cyprus and Italy in particular, it should not be forgotten that though there are a lot of general similarities, there is still a significant regional diversity between them.[9]

Within this broader setting, the aim of this contribution is to reconsider the character of exchange during the early 1st millennium BC between Italy and Greece, more precisely during the 10th to the 8th centuries. This period is of special interest as it establishes the social background for the developments of the Orientalizing Period. This was a time of transition in which the various modes of exchange

2. E.g. Kistler 2010; Dietler 2010; Hodos 2006, 127f; Pieraccini 2000.
3. Crielaard 2001, 194.
4. Naso 2000, 122.
5. E.g. Panagiotopoulos 2011, 36.
6. E.g. Kistler 2010, 745.
7. Hodos 2010, 82.
8. van Dommelen 1997, 309.
9. Whitley 1991, 345; Lemos 2002, 221.

between Bronze Age Italy - starting already during the 3rd millennium BC[10] - and the Eastern Mediterranean[11] were (re)established and probably reconfigured in the course of the Early Iron Age. Along these networks different novelties like olive cultivation,[12] purple dye production,[13] and the adoption of writing - to mention just a few - spread to the Central Mediterranean. Moreover, this period is of special interest for trying to understand the later Orientalizing Period in Italy. Profound changes in the settlement pattern during the latest phase of the Final Bronze Age and the Early Iron Age occur. The plateaus of the later large urban centres of the 9th and 8th century are occupied and increase in size during this period. More and more imported near eastern objects are found in graves[14] as the funerary assemblage is generally getting richer and more complex.[15] To refresh the discussion my arguments will emanate from the up to now less explored female agents, to and shed light on their role in the supposed exchange networks and how they take part in the construction of identities. Due to the limited space of this article, the focus will rest on two selected object groups, namely textile tools and faience bead necklaces. The aim of this paper is not to present an exhaustive survey of female graves with textile tools, but rather to raise some questions and discuss their potential within a limited archaeological framework. The geographical case studies will mostly comprise Early Iron Age Latium and Early Iron Age Attica. This selection is based on the archaeological situation in these two regions, where publication of cemeteries are available and form a viable empirical basis. Another advantage is that the sex of the human remains have been determined anthropologically, so that the often problematic archaeological definition of sex does not undermine the dataset.

Female graves of the Early Iron Age

As with most other parts of archaeological research, female role in the Early Iron Age is to a large extent understudied. Apart from sex determination and specialist studies on different object found in them, they have been significantly less considered in the light of interregional communication. This situation is rooted in a modern concept of gender roles in which women are far too often nearly completely absent

10. Maran 2007,18.
11. E.g. Cazzella and Recchia 2009; Jung 2009; Jung 2006; Eder and Jung 2005.
12. Evans and Recchia 2001, tab. 3.
13. Cazzella *et al*. 2005, 179.
14. Nijboer 2008, 434.
15. Riva 2006, 116.

in archaeology.[16] Yet a closer look at the funerary offerings from female graves indicates directly that there is a lot of potential in such an approach.

Agneta Strömberg‘s study on gender in the Iron Age graves of Athens recorded an average number of 2.0 objects in submycenaean male tombs in comparison to an average of 5.3 finds from female graves.[17] This means that statistically there should be more evidence in the archaeological record to trace interaction in female graves than in those of males. Yet, women somehow seem less appealing for studies of interaction. Apart from numbers alone, it is more interesting what might be symbolically expressed by these objects selected for interment. Are possible gender roles expressed by them? Are there similarities in parts of the funerary assemblage which might reflect inter-regional contacts? In my view one of the crucial explanations for why female graves are less attractive to many researchers, is the fact that modern gender roles are projected into these concepts. It still is common in many archaeological studies to presume that the female role is solemnly a part of the domestic sphere of society. Domestic in this regard is somehow understood as something limiting and passive Following this logic the potential for interaction is a rather small one. Beidelmann’s[18] suggestion that the ‘heroes‘ of exchange are seen as the male persons buried with swords and drinking vessels, who are circulating gifts among each other still seems to be common sense. This division of a ‘producing‘ female sphere and an ‘exchanging‘ male sphere has already been critiqued as a construct, which is nearly entirely born out of the modern Western thought, stereotyping their results in the observed society.[19] This is still widely common because scholars (male and female) are trained in an androcentric world, where they still learn to readily accept unquestioned the male power they find in the archaeological record.[20] To be clear, it’s not my purpose to deny that domestic activity can form a part of the female role, but I would rather argue that the role of women was not limited to this sphere. Instead there are many instances and patterns whereby we can suggest a supra-regional agency of the women. And I think that these aspects deserve a greater emphasis. As the main category of finds we deal with in the search for gender roles is evidence from funerals, we should not forget the specific problems and limits we are facing when we deal with this specific type of archaeological source. Funerary assemblages are perhaps not displaying one’s actual role in

16. McCafferty 2009, 22.
17. Strömberg 1993, 44ff.
18. Beidelman, 1989: 231.
19. Strathern, 1990, 72f; Koltsia 2007, 125; Arnold 1995; McCafferty 2009.
20. Hodder 1991, 13.

society, but rather an idealized image of status, age or gender attributed to the deceased. It is not my purpose here to discuss this matter in detail, the concept of 'role' in this article is regarded as something which has been ascribed by society, rather than an actual individual formulation of it. Several authors have already challenged this view of the non-active women. Susan Langdon has critiqued the view that the wealth of rich female graves was an expression of richness of the kin group, rather than an expression of the individual wealth of these women.[21]

If we now start to take a look at the archaeological evidence for roles we find different evidence to strengthen this point. A part of the female role indeed can be explained by the domestic. The two chests with the granary models found in the grave of the 'Rich Athenian Lady' of the Areopag[22] might be a good starting point for such a discussion. These artefacts may symbolise grain storage, and may well be seen as referring to the domestic sphere of production and fertility.[23] They are produced using local clays and as the distribution of the so far known 27 examples show, it seems to be a specific burial custom of Attica.[24] A possible predecessor of this rite is found in Euboea, in PG Grave 22 at Palia Perivolia. Among the grave goods was found a small ceramic chest which is commonly regarded as being a prototype of the chest found in the tomb of the Rich Athenian Lady, though its lid was not decorated with a granary model.[25] They can be aligned with other similarities observed in the burial customs between these two Regions, in male and female graves alike.The limited distribution of these granary models in the area of Attica is to be seen as a local concept relating to the representation of women - especially of rich women, as the examples from the Rich Athenian Lady and from the Isis Tomb in Eleusis indicate. Langdon's interesting reading that they could be linked to early cults of Demeter and Kore[26] might be a further argument which supports their domestic interpretation. This specific feature might be a representation of domestic activity, related to women, yet its limited distribution connects it rather to a local context, than to an inter-regional. But this is just one side of the coin, as this observation emanates only from a tiny part of the funerary assemblage. As we shall see, other objects from the tomb of the Rich Athenian Lady point to a connection to supra-regional exchange through their wide distribution in the Mediterranean.

21. Langdon 2005, 5.
22. Smithson 1968, 93f.
23. The critique on the interpretation as granaries has recently been rediscussed by Morris and Papadopoulos (2004, 229), who bring good arguments in favour of their interpretation as granaries.
24. Langdon 2005, 10.
25. Coldstream 1995, 401.
26. Langdon 2005, 15f.

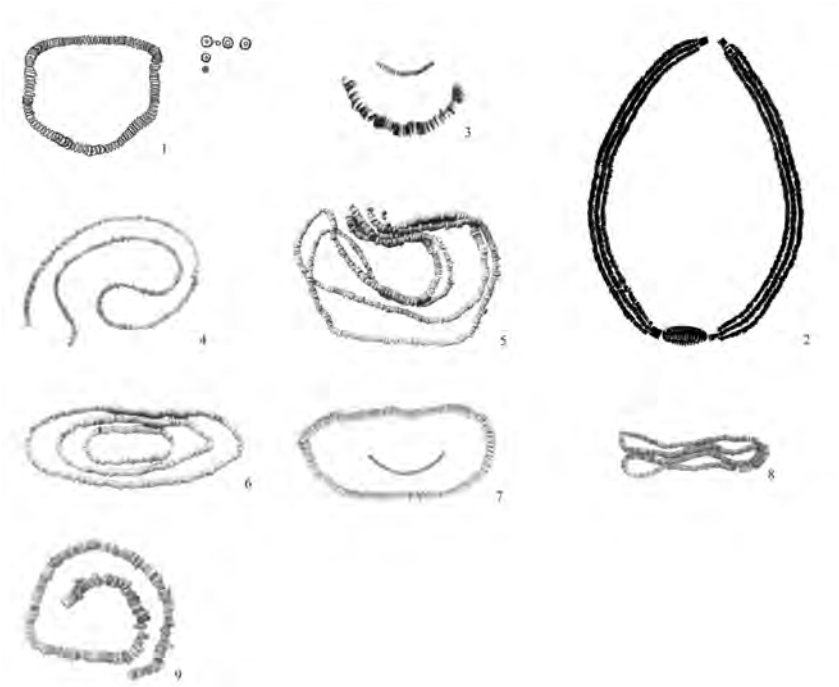


Fig. 1: *Faience disk bead necklaces: 1) Osteria dell'Osa tomb 117 (after Bietti Sestieri 2008: fig 4); 2) Areopag tomb of the Rich Athenian Lady (after Smithson 1968: Pl. 33); 3) Lefkandi, Toumba cemetery tomb 40 (after Popham and Lemos 1996: Pl. 44); 4) Lefkandi, Toumba Cemetery tomb 39 (after Popham and Lemos 1996: Pl. 40); 5) Lefkandi, Toumba Cemetery tomb 38 (after Popham and Lemos 1996: Pl. 40); 6) Lefkandi, Toumba Cemetery tomb 45 (after Popham and Lemos 1996: Pl. 51); 7) Lefkandi, Toumba Cemetery tomb 46 (after Popham and Lemos 1996: Pl. 53); 8) Lefkandi, Toumba Cemetery tomb 63 (after Popham and Lemos 1996: Pl. 70); 9) Lefkandi, Toumba Cemetery tomb 80 (after Popham and Lemos 1996: Pl. 85).*

One of the means by which different identities can be communicated and which are traditionally associated with women are different kinds of jewellery.[27] Among the precious jewellery of the grave like the golden ear- and finger-rings, or the ivory objects,[28] especially the necklace produced of more than 1100 blue-green faience disk-beads[29] is of interest for this present discussion. This kind of jewellery was probably produced in the Near East and has a widespread

27. Iaia 2007, 520.
28. Smithson 1968, 83.
29. Smithson 1968, pl. 33, 78.

distribution in the Mediterranean (Fig. 1)[30]. It is found in rich female graves, like the tomb 21 in Amathous, dating to CG II (first half of the 9th century BC) which contained a necklace of 924 faience beads of the same type as the one from the grave of the Rich Athenian Lady.[31] The distribution also includes Cretan graves, where faience disk beads are commonly found in different graves of the Knossos North cemetery[32] and on other sites from the Protogeometric Period onwards.[33] A dense concentration of this type of jewellery can be found in the Geometric cemeteries of Lefkandi, Euboea where seventeen female graves yielded necklaces of blue and green faience disk-beads.[34] In Athens and Attica they are also common from the 9th century as a marker of rich female graves. They have also been found, for example, in the early 9th century grave of the Odos Hag. Dimitriou or the Isis Tomb in Eleusis of the late 9th century BC[35] and tomb 144 of the Kerameikos cemetery.[36] Apart from the Eastern Mediterranean, necklaces made out of faience disk beads are also found in Italy. It is necessary to observe that they are not that densely distributed as in the Eastern Mediterranean, but concentrated in certain rich tombs. From the second half of 9th century onward they are found in a few rich female graves, but are absent in male graves. Like the Tomba dei Bronzetti Sardi of the Cavalupo necropolis in Vulci,[37] tomb 1 of the Poggio delle Granate in Populonia[38] or in Grave 117 of the necropolis of Osteria del'Osa.[39] In graves of the 8th and 7th century they are found more frequently. Sometimes the discoid faience beads were combined together with bone beads to form the necklaces. This wide distribution of a similar type of jewellery - although the survey of the evidence is far from being complete - is already a first indicator that apart from their role in local household communities, women seem to take part in the some sort of interregional exchange, as this shared burial custom is indicating. So it seems difficult to retain the idea of a solely domestic role for women in society, at least if we consider the burial evidence more closely. Another interesting aspect

30. Nightingale 2009, 503.
31. Gjerstad 1935, Pl. 25, 49;50.
32. e. g. Knossos Medical Faculty Site tomb 100SW (Coldstream and Catling Vol. I, Pl 298).
33. Coldstream *et al*. 1996, 600.
34. S Tomb 16, P Tomb 21, P Tomb 25 B, P Tomb 42, P Tomb 47, T Tomb 1, T Tomb 12A: Popham, Sackett and Themelis, 1980; Lefkandi Toumba Cemetery tomb 38, 39, 40, 42; 45, 46, 56; 63, 74, 80: (Popham and Lemos 1996).
35. Skias 1898, pl. 6.
36. Ruppenstein 2007, 232.
37. Fugazzola Delpino 1984, 96-106.
38. Fedeli 1983, 82ff.
39. Bietti Sestieri 2008, 145, fig. 4.

is, that we see a shared way of expressing female status in certain graves between large parts of the Eastern Mediterranean and the Central Mediterranean.

If we turn now to Italy, we can similarly observe a specific role for women in the society expressed in their local burial customs. The use of hut urns as a container for the cremated bones of the deceased since the 8th is seen as having a growing importance of the household.[40] It is believed that political control of these communities was practised by men,[41] whereas the distribution of food and drink seems to be associated with female identity, as food containers and drinking vessels in graves might indicate.[42] But beside this evidence also for the Italian Iron Age it can be argued that women had a role which was far from being exclusively related to the household community. Quite often axes or knifes are found in female graves of Italy often interpreted as belonging to sacrificial practices or commensal rituals centred around food preparation. It should not be forgotten, however, that the sharing of meat is an important activity in a lot of commensal rituals. The agency of women can sometimes also expressed by objects that we would normally consider to be belonging to the male sphere. Surprisingly, nearly half of the graves with chariots are those of females, showing that the notion of power is not restricted to men but is also something a women can acquire.[43] Moreover, the first writing in Italy for example is exclusively found in female graves of the 7th century in the form of epigraphic graffiti on pottery and textile tools. Only in the following centuries is some sort of representation of writing found also in rich male graves.[44] Apart from this, textile tools are seen as a status indicator for rich women, though at the same time they are often referred as presenting a domestic role.

Textile production tools in Early Iron Age female graves

Textile production tools are quite common in female graves of the Early Iron Age in the Eastern and Central Mediterranean. Usually they comprise different kinds of tools for spinning, like spindle whorls, or whole spindles and distaffs. Weaving is symbolised in the funerary assemblage by loom-weights, weights for tablet weaving or sometimes by models of looms.

Even though most of the textile tools are found in rich female graves, they are interpreted as symbolising a domestic role of women through textile

40. Riva 2006, 120.
41. Bietti Sestieri 2008, 155.
42. Bietti Sestieri 2008, 156.
43. Riva 2010; Metzner-Nebelsick 2009.
44. Bagnasco Gianni 1999, 85-106.

production for the household community. This interpretation is on the one hand due to the modern conception of gender, but also a misconception of the economic production mode of certain goods. Though textiles can be produced in an domestic environment this does not mean that they were just produced for it. A good comparison can be found in Post-Classical Mexico were textiles produced in a domestic mode did provide to the local market economy.[45] One the other side is this view an oversimplification of the role textiles have in a lot of societies. Beside their function for the distinction of differences such as gender, class or age,[46] they have an active role in numerous rituals.[47] So it is no surprise that examples of weaving equipment produced in precious materials like glass or amber are seen as a non-functional representation of the textile craft, which were associated with rich women.[48] Though the more lavishly produced examples are readily accepted as being status bearing objects, they still are seen in a functional way representing a craft within the household.[49] We need to note that the majority of them are made of simple materials like impasto clay and do not receive much attention by researchers unless they appear in great numbers. The origin of this specific burial custom is less well studied in contrast to research on examples coming from the Orientalizing Period. The first textile production tools are found in the graves of the Thapsos culture of south eastern Sicily during the 14th century BC (e. g. Tomb 7 in Thapsos).[50] They become part of a funerary assemblage in the same period as Eastern Mediterranean imports like Mycenaean pottery were deposited in graves for the first time. Other imports like amber bead necklaces and ivory combs from female graves have close parallels in the burial customs of Late Helladic Greece and in Late Bronze Age Cyprus, indicating a possible eastern influence of this specific burial custom.

In Greece spindle whorls are found already in Late Chalcolithic graves on the Cyclades, but the peak of this rite can be found in the Late Bronze Age. During this time, spindle whorls made out of clay or steatite are very common in female graves. The five golden spindles from circle A, grave 3 at Mycaenae,[51] as well as the ivory spindles from tomb 152 and tomb 65 at Perati, Attica[52] are rare exceptions and underline vividly their function as prestige items. During the Early Iron Age

45. McCaffertey and McCafferty 1991, 23.
46. Gleba 2009, 70.
47. Wagner-Hasel 2007, 330.
48. Gleba 2008, 173.
49. Ammann 2000, 276.
50. Orsi 1895, 103.
51. Karo 1930, pl. 17.
52. Iakovides 1969, pl. 15 and pl. 23.

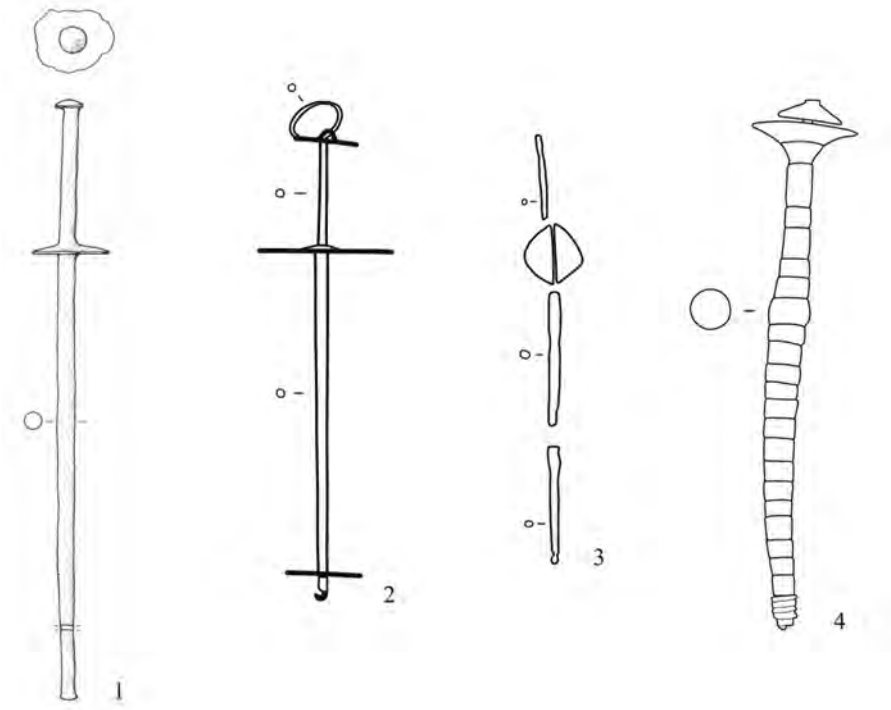


Fig. 2: *Bronze Spindles: 1) Torre Galli Tom 92 (after Pacciarelli 1999: Pl 69); 2-3) Le Caprine Tomb 5 (after Damiani & Villa 2005: fig. 2); 4) Rocca Malatestiana, Verucchio Tomb 47 (after Forte 1994: 79).*

this custom is still frequently found, although it is now less common and only found in some rich burials. The grave already discussed of the 'Rich Athenian Lady', for example, contained two clay spindle whorls[53]. Other examples of clay spindle whorls have been found in 9th century graves at Athens in Areopag Grave D 16:2,[54] in tomb G 39 and G12 in the Kerameikos[55] and Odos Adrianou tomb PH II.[56] Examples made of faience are known only from Keramaikos tomb 146.[57] A close parallel was found in tomb 100 of the Medical Faculty site in Knossos.[58] This represents a surprising find, for spindle whorls made out of other materials than clay are normally not common anymore in Greece during this period. The exception seems to be Crete where one spindle whorl was found in tomb 283 of

53. Smithson 1968, pl. 30, 58-59.
54. Young 1949, pl. 72, 24.
55. Kübler 1974, 216-218, 235.
56. Smithson 1974, 379ff.
57. Ruppenstein 2007, 233.
58. Coldstream *et al*. 1996, 133.

the medical faculty site, which was produced of serpentenite and another one made out of chlorite.[59] Whole spindles in the grave are considerable rare in the Early Iron Age of the Eastern Mediterranean. The only examples so far known are from Cyprus. One was found in the Cypro-Geometric I tomb 78 at Palaepaphos - Skales and consists of an iron rod with an attached spindle whorl.[60] Two other ones made of bronze are without a secure context and came to light in the Bulwer Collection in Cambridge, but they can be at least attributed to come from the cemetery of Tamassos.[61]

Turning back to Italy we can observe a similar but different situation in the Early Iron Age. The first textile production tools found in graves are produced in a rather simple fashion, made of local impasto clay. The custom of burying textile tools with rich women was not simply adopted from the East, but was modified in a local way. Beside spindle whorls, small clay weights - the so called *rocchetti* - are found frequently in richer graves.[62] They may have been used for a special weaving technique - tablet weaving - which was used to produce special decorated borders for textiles. Sometimes these were embroidered with different patterns or special dyes, like the purple dyed border of mantle 2 found in Verrucchio tomb 89 is demonstrating.[63] In other parts of the Mediterranean this technique is not known from archaeological finds, but can be reconstructed for the Eastern Mediterranean by iconography. By the turn of the 1st millennium BC. this tradition of placing such weights in graves is distributed further north in Italy. Alongside this widening distribution, the first metal spindles are found in graves together with other textile production tools. Like the spindles from Pantano di Cleto[64] or Torre Galli tomb 92.[65] One of the first bronze spindles in Central Italy is found among the grave goods belonging to a young girl from Le Caprine, tomb 5 in Latium. The tomb is dated to the latest phase of the Italian Final Bronze Age.[66] Slightly later examples dating to the Latial II B2 Period (second half of the 9th century BC) are found in Osteria dell'Osa. Grave 44 yielded a wooden spindle covered by a bronze sheet.[67] One other early example was found

59. Coldstream *et al*. 1996, 623.
60. Karageorghis 1983, 241, pl. CLI.
61. Buchholz 2010, 130, fig. 61 a and b.
62. Gleba 2008, 173.
63. von Eles 2002, 220.
64. Gleba 2011, 28.
65. Pacciarelli 1999, 69.
66. Damiani and Villa 2005, 65, fig. 2.
67. Bietti Sestieri 1992, 747.

in grave 47 and was completely produced of a bronze sheet.[68] Symbolic textile tools, mostly distaffs and spindles made out of precious materials were a part of female symbolism, especially in graves, from the 8th-7th centuries onward. Most of them were perhaps not practically used in everyday production of textiles, because of their costly materials but were designed to be a symbol.[69] The great variety in materials used, the kind of textile tools in the graves and their number make it still difficult to interpret the textile tools in the current state of research (Fig. 2). Thus it seems that this special custom was most likely adopted from the Eastern Mediterranean during the late Middle Bronze Age of Italy and is slowly transformed in the course of the 1st millennium to a status symbol itself.

Apart from this textile tools, a recent study on the handmade globular pyxis from Protogeometric Greece and the Eastern Mediterranean, highlight another case in which an object connected with textile production was distributed widely in the Mediterranean and especially in the graves of women.

Social Networks - Hospitality in the Iron Age Mediterranean

The wide distribution of certain kinds of objects and burial customs between Cyprus, Greece, Crete and Italy, as well as other parts of the Mediterranean now needs to be explained. We cannot describe exotic items as just being imported from afar and laid in the grave because of their intrinsic value, when they are regularly incorporated in local burial customs. One possible way to describe this is the assumption that certain objects and customs circulated by the means of networks of hospitality.[70] In many pre-state societies it is a valid way for interaction between different geographical regions to be practised. This has already been used to describe the diffusion of drinking habits and seems to me to be a good way to explain the connection between these regions. As gift-giving has been widely discussed for a long time now, I do not want to delve too deeply into general principles, but rather highlight some aspects which are relevant to describe the role of women and textiles in it. In order to envisage networks of hospitality in the period of study we have to rely on written sources. Long range contacts could also be a source of power in a local context.[71] The Homeric epics illustrate vividly social interaction in a period quite close to the 1st millennium BC. The historicity of the epics and the society described in them are still controversial, but this goes beyond the current

68. Bietti Sestieri 1992, 755.
69. Gleba 2011, 27.
70. Kistler 2010, 744.
71. Schon 2010, 235; Helms 1988.

discussion. However this is not of central concern to my arguments, because I do not intend to find direct matches between the written texts and the archaeological record, but rather I seek to pinpoint broader similarities which can be found between the epics and the archaeological record.[72]

At first it is important to clarify the ancient Greek terms which are used in the written sources, in order to understand the concepts which are used by the ancient authors. One of the Greek terms used to describe guest-friendship is *xenos.* It denotes ritualised communication over a long distance between two persons, which grants them mutual rights and responsibilities. Sometimes this relationship can be so intense that it is even considered to be kin-like. Important expressions of this relationship are gift-giving and feasting. Gifts are given on special occasions, mostly rituals of status change, like weddings or funerals. They establish a connection over a long distance by creating a reciprocal memory between the *xenoi*. Funerals are of great importance as they link multiple generations by the grave offerings given to the deceased. They are also a good example which highlights that reciprocity is not only constructed over geographical distances, but also through time. Gifts to the deceased represent a connection between different generations and restructure the created bond through time. From the epics, we can observe categories of objects that are commonly bestowed as gifts. The first are metal objects, such as drinking vessels, weapons or armour. The second category comprises many kinds of textiles including veils, robes, or other types of fabrics. It is important to note that it is possible to distinguish which part of the society is donating which object. The textiles are in general given by the *basileus* himself or by him and his wife. Metal objects on the other hand are more likely to be given by the *demos.*[73] This division is directly related with the value that textiles and textile production had. Unlike metallic gifts, which could have been already in gift-giving cycles for quite a time, textiles used as gifts have a special value. They are produced by the *basilissa*, which means that they are actually produced within the *oikos* of one *xenos*. By exchanging items crafted in your own household you establish a more personal relation with your guest-friend, than you would do with objects which are not produced locally, but which gained their value by its former bearer.[74] This observation is strengthened by the fact that textile production is always associated with women of a high status. They are probably not producing everyday textiles, but often textiles for a special occasion or with a specific value. Penelope for example weaves the shroud for Laertes, her father-in-law. Besides she and other women are described as weaving

72. Ulf 2002, 346.
73. Wagner-Hasel 2000, 134.
74. Wagner-Hasel 2003, 169.

precious purple dyed textiles, which were highly in demand.[75] Their production was time consuming with all the steps necessary to produce them, especially it was expensive to obtain the dye for them. So it is no surprise that in the epics purple dyed textiles are only worn or even owned by individuals of high rank.[76] Apart from the role actual textiles and their craftpersons played in gift-exchange, there is some - even though sparse - evidence for women actually exchanging goods. Moreover the items exchanged are high prestige textile tools. In one episode of the Odyssey,[77] Helen of Sparta, wife of Menelaos, gives a golden spindle and a silver basket for the raw wool come to the wife of guest-friend of her husband. This demonstrates that besides the role the product of their work played in gift-exchange between *xenoi*, that women may have at times played an active role in gift exchange.

Creating the global and yet local

Now that the archaeological record as well as a possible model for the explanation of this exchange has been, the question remains how this can be related to the construction of identities. An important part of the *xenie* is that it is creating an interregional social collective[78] on the basis of networks of hospitality between the involved parties. The reciprocal exchange between the *xenoi* is (re)defining and (re) shaping their identity with every interaction, as well as through its very existence.[79] Identity shall be seen here as a shared construction of a social collective based on common origins, or exclusively shared characteristics. It is to be understood as an on-going discursive delimitation, rather than a fixed status.[80] It is expressed by the *habitus* of a local social collective. The *habitus* of a social collectives can be defined in the following manner:

> Systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles which generate and organize practices and representations that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends or an express mastery of the operations necessary in order to attain them [...]
>
> (Bourdieu 1990, 53)

75. Blum 1998, 68.
76. Blum 1998, 68.
77. Homer, 4, 130.
78. According to Bhabha (2004: 5) social collectives are specific temporal constellations sharing a lot of common elements with others.
79. Beidelmann 1989, 231.
80. Hall 1996, 3.

These dispositions are developed by each member of a social collective by his/her own experiences memorised within their bodies. They define a certain taste and lifestyle of a group, which is used as a medium of exclusion and delimitation.[81] It is suggesting a certain form of typical collective behavior.[82] The *habitus* is the basic cohesive force which forms a group identity, as well as all the different identities expressed inside this collective. It is visible by material culture, which form the result of behaviour of human beings. Burials are a good example for this concept, as the funerary assemblage does not represent directly the deceased but rather the society burying him or her.[83] The problem with the interpretation of the funerary assemblage is hence at first that it is difficult to approach the symbolized meanings expressed by the objects. Often they do not have just one meaning at the same time, but are expressing multiple purposes at the same time.[84] This is the case with the granaries in female burials of Early Iron Age Attica, or with the weapons and chariots in female graves in Italy. These are examples of how a special local identity, in this case of rich women, is represented each in their local context. The identity must not be exclusively something which is only expressed in a local way. As the glimpse at the written sources has indicated, defined networks of hospitality and their specific group identity may reflect shared global *habitus*. An individual can be part of multiple collectives which have each their own customs. So one can act with different *habitus* at the same time. Gift-giving and various rituals of commensality are forming the ties of these networks and are important foundation points. Single objects may also express a shared identity as they are created to serve a specific requirement of a group. They function also as a medium to memorize and materialize ties within a group.[85]

This is the case, for example, with the wide geographical distribution of necklaces produced of faience disk beads in rich female graves. Its bearer affiliates herself to an interregional social collective by wearing this particular object. In this case of global interaction it should be noted that the local *habitus* is modified by the incorporation of certain elements of the other group behavior.[86] It is exactly these moments of interaction which postcolonial studies are concerned with and where their analytical strength lies, compared

81. Bourdieu 1982, 44.
82. Bourdieu 1979, 186.
83. Parker Pearson 1999, 84.
84. Sørensen 2005, 289, fig. 3.
85. Feldman 2006, 165.
86. Krais and Gebauer 2010, 43.

to concepts as diffusion or acculturation.[87] As the integration of a *habitus* is not something happening in an instant, but rather a process of repeated social memorisation through different fluid interaction.[88] Possible encounters could take place during feasting, which is one crucial tie of hospitality. It has been already shown how feasting is involving the whole body in the perception of it and to be an important factor in memorising social practices.[89] Various archaeological features underline the role of feasting in this encounter. The interaction itself has been described as a third space by postcolonial theorists, most notably Homi Bhabha. Something central in Bhaba's notion of third space is, that the different encounters are not creating an amalgam of the two elements of the interacting collectives, but rather something substantially new in which ones known social identities are challenged and newly negotiated.[90] To this field of theory can be added the concept of 'glocalization' - emanating from social theory - which has been applied to describe the merging of global and the local to a new cultural entity, in which impulses from the outside are transformed by incorporating them in the local social context.[91]

Regarding funerary assemblages of female graves, this may best be explained by the textile tools. It is not a concrete object which is used to show membership of a certain social figuration, but rather the craft, or more general the activity which is used to express the affiliation. This means that it is not a type of object which can be compared between different regions, but rather a custom referring to the geographical area within which it was shared.[92] As we can see by a cross-cultural comparison between, Greece, Crete, Cyprus and Italy we have the same practice expressed by different objects, every time in its respective local interpretation. Textile tools from Italy are therefore of special interest. There are not the only kind of tools being deposited in graves, but they are reflecting different technological traditions. This shared interregional *habitus* of burying a rich woman with textile tools is in the first instance restricted to a certain class of society. In the course of the 8th century BC this custom became more common and is broadly distributed in female graves and distinction of social status is then expressed by tools - mostly spindles - made of metal or other precious materials, and these have become a prestige item in their own right. A possible explanation for this can be that the *habitus* is being desired by other

87. Fahlander 2008, 29.
88. Fahlander 2008, 22.
89. Hamilakis 1998, 117.
90. Bhabha 2004, 54.
91. Maran 2011, 283.
92. Russell 2010, 107.

groups of the society that were previously excluded from this global collective. These groups try to adopt the signs used by the high status collective to express their affiliation.[93] This can lead to a situation, in which a former global identity has become a local point of reference instead.

Conclusion

As this brief discussion of some of the grave assemblages of the 1st millennium BC has shown, there is still considerable potential for understanding the various ways that women may have contributed to different types of exchange during the Early Iron Age in the Mediterranean. As it might have been visible, they enable us to discuss aspects of diverse exchange networks on a different level as it has been done for most of the time. And of course in a different manner, as has been discussed for a long time with male burials. The study of their grave offerings open up another sphere of these societies which has been considerably understudied. By comparing the graves of both sexes we might be able to gain a more complete picture than just what the dominant research tradition allows. On the other side we have gained a rather new research subject to study the way in which more global ideas might be adapted and transformed on a local level by the means of networks of shared customs between certain parts of the society.

The wide distribution of jewellery like the faience disk-bead necklaces in the Central and Eastern Mediterranean displays how networks might have communicated some sort of shared taste between different geographical regions as they reflect the affiliations of its bearer within this supra-regional social collective. Furthermore, textile production tools make it possible to trace local variations of another widely distributed aspect of the burial rites. As the archaeological material suggests, the custom of burying women of high status with textile tools is an influence from the Eastern Mediterranean which was adopted in Italy during the Late Bronze Age. In the course of the 1st millennium BC these tools become more common in graves. They are by that time made of metals and probably other precious materials in some of the richest burials. This seems to be a local variation of this widely distributed custom, as metal spindles are unknown in most part of the Eastern Mediterranean apart from Cyprus. All of these customs are part of the materialisation of shared global aspects of the *habitus* of these groups, materialising a collective identity. This does not mean that the identity of the local group is less meaningful and that there is not a strong degree of diversity between these groups. Instead the coincidence and even the entanglement of a

93. Elias 1997, 353.

global and a local identity is what we are observing if we take a detailed look at the funerary assemblage. But as with most of the archaeological evidence we can trace this just for certain groups of the society, supposing that the participation in this rite might have been a source of inequality.

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Adoring the past: Anthropomorphic art and body language in the Iron Age Mediterranean

Christian Mühlenbock

The current article examines the role anthropomorphic representations in the Iron Age Mediterranean. Using two case studies, one from Cyprus and one from Sicily, it is noted that similar body gestures – the uplifted arms - on corplastic figurines was distributed over a vast areas of time and space. Originating in Cretan Bronze Age, the gesture regained its popularity several hundred years later in the Iron Age. The posture was eventually integrated in a multitude of ways in many local communities in the Cyprus, in the Aegean and in Italy and Sicily. While the local significance of the gesture no doubt was of commanding importance it is also argued that it also became popular because it was part of a Mediterranean body language with deep roots and a distant mythical past. The conclusion is therefore that the gesture with the uplifted arms was part of a well-known body language which was part of a cohesive force to bind different parts of the Mediterranean closer together.

Introduction

Gestures and body language, along with speech, are our most fundamental vehicles to communicate with each other. Bodily expressions, or body techniques – a term for nonverbal communication coined by Marcel Mauss –, are fundamental in expressing identity and cultural belonging.[1] In his frequently quoted text, Mauss offers multiple examples of how body techniques are both inherited in what he refers to as *Habitus* and also adopted by individuals who mimic body languages in order to associate themselves with a certain group.[2] This is for instance highlighted in Mauss' own experiences from World War I when he was hospitalised in New York and with a keen eye observed that the nurses there had an unusual way to walk. He then came to the conclusion that they did so inspired by female actors from Hollywood movies. Later, when he observed the same phenomenon

1. Mauss 1973 [1935].
2. Mauss 1973 [1935].

among females in Paris he realised that the American cinema was responsible there too.[3] In a similar fashion he recognised that the French and English armies mastered different body techniques when digging trenches during World War I; hence, when the English were presented with tools from the French arsenal they were unable to utilise them properly and vice versa. Therefore, all spades had to be changed whenever one group relived the other.[4] It follows that carefully observing present as well as historical bodily practices carries the potential to not only demonstrate how body techniques are exchanged between individuals, but also how body techniques can be culturally restricted, thus signalling belonging and exclusion. We can therefore expect that body language is closely related to human identity, not only on a national and cultural level, but also on an everyday basis between people from different classes and different genders.[5]

When studying humans from prehistory or historical societies without written records, we are often able to study snapshots of human movements which are presented and encoded by artists from the past on wall paintings, on pottery or in the shape of figurines. Since we, most of the time, lack textual descriptions, we are often left in the dark about what these human representations actually mean. Simply speaking, we are trying to interpret an interpretation.[6] A common method to overcome this difficulty in past studies has been to seek more all-encompassing solutions that try to designate specific representations to single categories. Often inspired by psychoanalysis and structuralism, researchers have tried to find underlying and inherited subconscious body techniques which are common to all humans.[7]

The most famous or perhaps infamous example of this last sort is trying to designate all pre-historic female figurative representations to one single "mother goddess" whose bodily traits stands for reproduction and re-birth.[8] Although these essentialist attempts promptly were heavily criticised and generally rejected,[9] the "mother goddess theory" has been surprisingly long lived.[10] As Morris has observed these theories are problematic because they essentially make variety insignificant since they privilege group uniformity.[11]

3. Mauss 1973 [1935], 72.
4. Mauss 1973 [1935], 71.
5. Bremmer 1991; Thomas 1991.
6. Joyce 1993, 255-257.
7. Goodison and Morris 1998.
8. Meskell 1995; Goodison and Morris 1998 for overviews of this.
9. Fleming 1969; Ucko 1968.
10. Morris 2009, 180.
11. Morris 2009, 181.

The contextual perspective

During the past 30 years more and more researchers have acknowledged that variety matters and that contextual analysis is of outmost importance if we are to make sense of past human representations.[12] Joyce notes that although figurative representations from around the globe appear to be similar, these representations often mask carefully selected and crafted attributes that are very important in the dialectic process of creating identities. Therefore, she comes to the conclusion that it is imperative to recognise what appears to be even to most insignificant detail when studying figurines from the past.[13]

Tringham and Conkey have emphasised the need to examine the nature of the archaeological context where the figurative representations were found.[14] They argue that when trying to make sense of a figurative representation it is of major importance if the object was found in a house or in a rubbish pit, for example. Furthermore, we have to investigate what other objects were associated with the object we are interested in. Hence, with more precise recognition of the uniqueness of the object of study, combined with its contextual relationships, we will be able to better understand its social and cultural dimensions.[15]

The Mediterranean perspective

However, emphasising local contexts and restricted social and symbolic meaning in figurative studies do not exclude the possibility that we simultaneously find shared, or at least similar, meanings among dispersed contexts located in wide geographical areas. The "mother goddess" theory discussed above is indeed an extreme example but during periods of intense economic and social contact between regions, like for instance during the European Bronze Age, we also know that material expressions as well as ideas spread over vast geographical areas.[16]

After the collapse of the interregional exchange networks around the 12th century BC, the period after 900 BC witnessed a renewed contact between particularly the coastal regions in the eastern Mediterranean.[17] The contact zone were subsequently expanded, and in the wake of Phonician and Greek colonial endeavours the interior regions of the colonised areas were eventually more

12. E.g. Hodder 1982; Shanks and Tilley 1987.
13. Joyce 1993, 256.
14. Tringham and Conkey 1998, 27-29.
15. Morris and Peatfield 2002; Morris 2009, 180; Stig Sørensen and Rebay-Salisbury 2012.
16. Sherratt and Sherratt 1991; Sherratt and Sherratt 1993; Kristansen and Larsson 2005.
17. Sherratt and Sherratt 1993, 364-365.

firmly integrated into a wider network of exchange.[18] What emerged during the following centuries, contradictory to the heavily centralised economy of the previous Bronze Age, was a network of numerous independent, political and economic entities which were more or less active in the Mediterranean arena.[19] It is true that some regions still were dominant in production and trade but the capacity of independent city-states and independent tradesmen created a process which some scholars have compared to modern globalization.[20] The more arbitrary and random modes of interaction, similar to what we find in the modern world of today, resulted in two major trajectories in how new products and new ideas and institutions were appropriated by local communities. On the one hand we find the creation of a similar Mediterranean culture, what Ian Morris refers to as Mediteranisation. This process resulted in a more coherent line of desires among different Mediterranean communities.[21] On the other hand, the lack of centralized authority also led to a more local translation of the shared cultural elements, which, at least during the 7th and 6th centuries BC resulted in a more irregular and transformative appropriation of goods and ideas.[22]

Goddess figurines, anthropomorphic cups and artistic traditions

In this paper, and in consideration of the above previous studies, I will deal with four three-dimensional figurative representations from Cyprus and Sicily (two from each island). The most obvious trait shared by these four examples is that they all hold their arms beside their heads in an upright position. The gesture is otherwise, at least in Mediterranean research, perhaps most well-known from final and post-palatial (1450-1200 BC) Crete where it is associated with so-called "goddess" figurines.[23] These coroplastic figurines have mostly been found in association with sanctuary buildings where they typically hold prominent positions of worship.[24] In this text however, I will engage with similar representations of much later date. The aim here is trying to understand how and why the gesture with uplifted arms observed in Bronze Age Crete was revitalised during the archaic period, and also why the gesture with it gained in popularity among the population in new Mediterranean territories.

18. Sherratt and Sherratt 1993, 367-369.
19. Malkin 2011, 22.
20. Morris 2003; Sherratt 2003; Hodos, 2006, 2010; Malkin 2011.
21. Morris 2003; Hodos 2010.
22. E.g. Sherratt 2012.
23. Gesell 2004.
24. Gesell 2004.

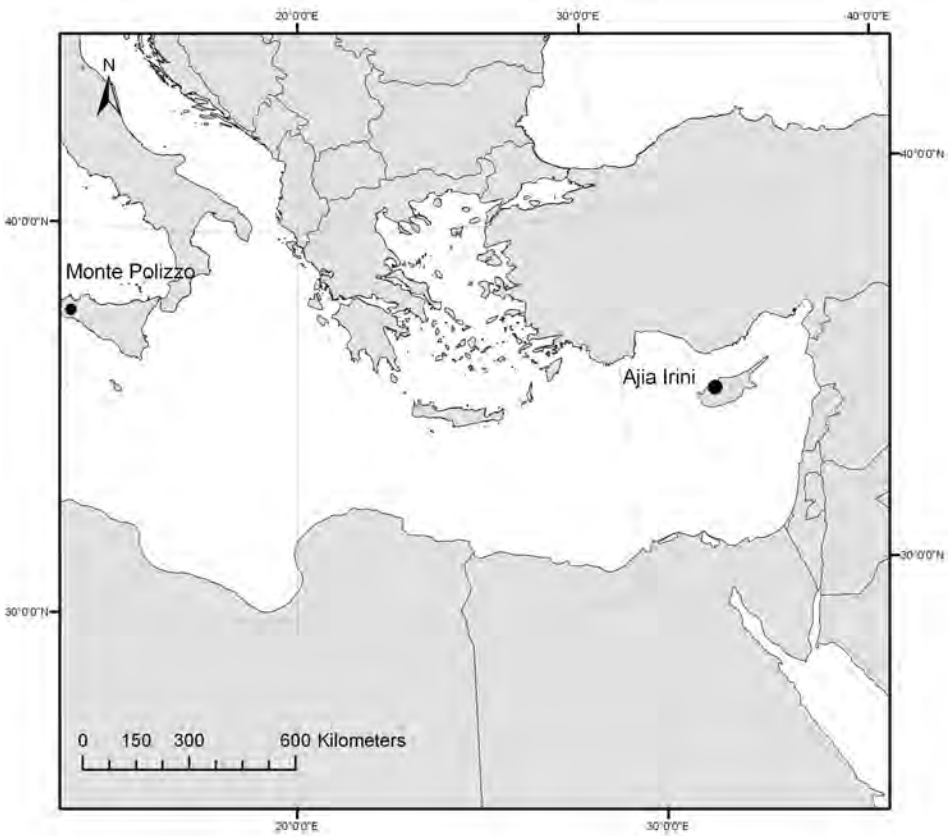


Fig. 1: *Map over the Eastern and the central Mediterranean with the two main sites mentioned in the text (Ajia Irini, Cyprus and Monte Polizzo, Sicily) highlighted. Scale 1:1300000.*

Although Sicily and Cyprus are ecologically similar, their historical development has been quite different. Much of the difference is probably related to geography and geology; while Cyprus is located close to the easternmost shores of the Mediterranean, Sicily enjoys a strategic position in its very centre (Fig. 1). The differences in history, political, economic and social relationships are reflected in the artistic influences and developments in two islands over time.

Cypriot prehistory is replete with anthropomorphic representations from earliest human occupation of the island until the present. Among the earliest Cypriot figures the ones from Khirokitia (7000-5500 BC) are mostly phallic shaped but two examples also depict sexually ambiguous figures.[25] Also from

25. Christou 2006, 98.

one of the earliest Neolithic sites in Cyprus, Petra tou Limniti, comes two oval shaped stone idols which clearly, in a very simplistic way, combine both male and female genitalia.[26] Sicily was inhabited much earlier than Cyprus and here the earliest traces depicting humans are rock paintings dating to around 10000 BC.[27] Figurines, on the other hand exist from around 5000 BC onwards and the first anthropomorphic representations are limited to human heads, making gender determination difficult.[28] From the Early Chalcolithic (3500-3000 BC) tombs of Piano Vento, we do find anthropomorphic figures in Sicily representing a male and a more sexually ambiguous figure depicting a mixed human/animal representation nick-named the "centaur".[29] Roughly from the same time, from Cozzo Busoné, not very far from Agrigento, come two pebble figurines of phallic shape with pecked female attributes filled with red ochre.[30]

The most well-known figurines from Cypriot Chalcolithic (4000/3500-2500/2200 BC) are the cross-shaped stone idols in various sizes, representing what is assumed to be seated females. Although their meaning is disputed, their physical shape, in their most stylized form; represent complete human bodies.[31] Normally they have outstretched arms, legs in a squatting position, a head and sometimes additional details such as breasts and feet.[32] From the Bronze Age (2500/2300-1050 BC) and at least into the Iron Age, terracotta became the favourite material for Cypriote figurine craftsmen. The earliest Bronze Age examples are the early plank figurines which were produced from the final phase of Early Cypriote Bronze Age to sometime in the Middle Cypriote Bronze Age (*c*. 2000-1800 BC). Their typical characteristics are the rectangular plank shape fashioned out of a relatively thin piece of terracotta. The rectangular head and face, with a moulded nose and incised eyes and sometimes incised mouth, is attached to a long neck joining a rectangular body which is often is adorned with incised lines in various decorative patterns.[33] Some plank figurines can be multi-faced and others carry a baby.[34] Traditionally the plank figures have mostly been interpreted as feminine.[35] But there is an ever increasing awareness that

26. Åström 2003, 32.
27. Leighton 1999, 38.
28. Leighton 1999, 67.
29. Leighton 1999, 96.
30. Leighton 1999, 97.
31. Åström 2003, 31.
32. a Campo 1994, 80-82.
33. a Campo 1994, 100-104.
34. a Campo 1994, 100.
35. a Campo 1994, 100; Karageorghis 2003, 60.

the plank figurines can benefit from not solely be interpreted in binary terms as either male or female. Rather, as Knapp and Meskell suggests; a more nuanced analysis might uncover a manifold or even ambiguous gender representations.[36] The typical Late Bronze Age Cypriote (1450-1200 BC) type A and B figurines representing nude female figurines with either human or animal face can also benefit from a similar approach.

While the evidences suggests that the Cypriotes, during the Bronze Age, had a desire for more complex and wide reaching representations of anthropomorphic representations the Sicilian anthropomorphic material from the Bronze Age, is much more scarce. Figurines exist, but they appear in a much more random fashion. One of the more complex and intriguing finds stem from castelluciano da San Giuliano, Caltanissetta, from the Sicilian Early Bronze Age (2500-1500 BC). Here the excavators found the remains of more than 40 figurines; some were almost complete while others were very fragmented. A few of the figurines have what appear to be male genitalia while others have breasts.[37] The size difference between the figurines is also notable with the largest figurine being almost 40 cm while the smallest figurine is no more than 6 cm. This has led the excavators to presume that the find represents a family with adults and children possibly related to local religion and local ritual.[38]

This brief and perhaps slightly random comparison of anthropomorphic art between Cyprus and Sicily demonstrate two important points. The first one is that figurative representations were much more common in Cyprus than in Sicily; at least from 4000 BC and onwards. Secondly, from the Early Bronze Age, the Cypriote figurine production was far more standardised (in the sense that similar types were found in numerous contexts all over the island) than it was in Sicily where we generally find unique anthropomorphic figurines in very few places.

Cypriot "Goddess" figurines with uplifted arms – previous interpretations

A relatively advanced and long lived tradition of terracotta figurine production was already in place when the earliest known small terracotta figurines uplifted arms were discovered at the coastal site of Enkomi in Cyprus. These figurines (more than 250), predominantly depicting females, were the first of their kind excavated in a secure archaeological context in Cyprus. There is some disagreement on their precise date, but Webb has convincingly argued that they

36. Knapp and Meskell 1997; Knapp 2008, 142.
37. Orlandini 1968.
38. Orlandini 1968, 58.

were introduced to Cyprus around the middle of the 12th century BC.[39] After the initial introduction the "goddess" figurines with uplifted arms remained popular in Cyprus for an extended period of time. The presence of these figurines is attested throughout the intervening centuries and became popular again during the Late Cypro-Archaic II (600-470 BC) and disappears entirely during the later Cypro-Classical period.[40] During this time span, of more than 500 years, much of the original characteristics were lost although the key emblematic feature with the uplifted arms was kept intact.[41]

Traditionally, these figurines have been labelled "goddesses with uplifted arms" and most scholars agree that the source of inspiration was Cretan figurines which typically have the same posture and share a number of other characteristics such as the uplifted arms, almond shaped eyes, marked eyelashes, spots on their cheeks and a high tiara.[42] The appellation, "goddess" is probably also borrowed from the term most often used for the Cretan figurines. In the Cypriot context, however, this label is unfortunate, biased and has been justly criticised for being murky due to the lack of definition of what the term really means.[43] Another flaw with the "goddess" terminology is that it tends to collapse the boundary between description and interpretation.[44] The terminology itself: "goddess", can easily obscure alternative interpretations.

The understanding of the gesture itself relies heavily on previous interpretations of Cretan figurines. In Cypriote contexts the gesture with the uplifted arms has been interpreted as signs of mourning (by individuals), praying and as a manifestation of divine presence,[45] but here there is no consensus. Rather, it appears as if there are as many interpretations as there are scholars.

Bolger has noted that the interpretations of the Cypriot figurine studies (including the "goddess with uplifted arms") to a large extent rely on traditional archaeological methods such as typology rather than on contextual considerations.[46] The result is that chronological and evolutional studies have been at the forefront in the interpretation of these figurines preventing a proper understanding of their meaning. In Cypriot research there is a gap between more traditionalist interpretations of the figurative material based mostly on stylistic

39. Webb 1999, 215.
40. Karageorghis 1977; Nicolaou 1979, 252.
41. Nicolaou 1979, 252.
42. Karageorghis 2001, 325.
43. Smith 2010, 134.
44. Peatfield 2001, 52.
45. Webb 1999, 215.
46. Bolger 2003, 84.

attributes and the more recent trend where social and gender aspects play a more prominent role in determining the meaning of these figures.[47]

What is lacking from Cyprus, therefore, is a more contextual interpretation similar to Peatfield and Morris' investigation of Cretan terracotta figurines from the peak sanctuary of Atsiphades. Here, mostly based on a careful excavation methodology with detailed recordings of the figurine finds, they argue that the postures envisaged by the many figurines, including the uplifted arms posture, probably reflect the dynamic body language of the worshipers who possibly were engaged in performances and ritual action.[48] Hence, Peatfield and Morris effectively move away from the notion that the figurines represents passive body language of adoration or supplication arguing that instead they actually could represent spiritual experiences such as divination, trance or altered states of consciousness.[49] In their opinion, the figurines are direct reflections of individual bodily action and performance.

Sicilian anthropomorphic cups with uplifted arms

While the Cypriot "goddess with uplifted arms" is well-established in Cypriot research, Sicilian anthropomorphic "cups with uplifted arms" is a relatively new and not so well articulated phenomenon in Sicilian research. Anthropomorphic/zoomorphic cups are relatively well known and previously discussed in various publications, but except for one example known from the 7th century Segesta,[50] most representations with uplifted arms have been discovered since 1999 as a result of excavations in the indigenous Iron Age site of Monte Polizzo.[51] Therefore, no research, as yet, is particularly concerned with this relatively limited occurrence.

If the gesture with uplifted arms is rare in Sicily it more frequently occurs in mainland Italy.[52] There, the gesture has generally been associated with a phenomenon inspired by Greek and Mediterranean prehistoric and historic art based on the fact that the gesture was introduced around the 8th BC.[53] Similar to Cyprus, the interpretation of the gesture is often related to praying, lamentation or religious ecstasy.[54]

47. Zeman-Wiśniewska 2012, 153.
48. Peatfield 2001, 55; Peatfield and Morris 2012.
49. Peatfield 2001, 55; Peatfield and Morris 2012, 235-237.
50. La Rosa 1989, tav. 2, fig. 66.
51. Mühlenbock 2008.
52. Leighton 1999, 266.
53. Orlandini 1971, 282.
54. Orlandini 1971, 282.

Due to similarities between west Sicilian figurative art and the art of mainland Italy Sebastiano Tusa has suggested that the figurative art of the *capeduncola* (a cup with an anthropomorphic/zoomorphic handle) was brought to Sicily by Italian immigrants.[55] Here, particularly Francesca Spatafora has been a critical voice pointing to the importance of local agents in the creation and adoption of figurative elements among the inhabitants of Sicily.[56] Following this path contextual considerations have been acknowledged as fundamental in order to understand the meaning of anthropomorphic representations in Sicily.[57]

Objects and contexts

Thus, in order to remedy the lack of contextualisation in earlier work, both in Cyprus and Sicily, this study will venture into more limited, confined and well documented territories when trying to make sense of the wide distribution of figurative representations with uplifted arms.

Sicily

Monte Polizzo is located in western Sicily and is a proto urban settlement in the hinterland of one of the island´s most remote parts. Here, on an altitude of more than 700 meters we excavated five 6th century BC domestic buildings. Three houses contained, among many other things, vessels with anthropomorphic handles. Two of these have previously been published; those will be described further in this text. Both *capeduncole* from Monte Polizzo were discovered among ordinary household objects inside two dwellings simultaneously destroyed around the middle of the 6th century BC. The houses were multifunctional and self-sufficient production units with ample evidence of textile production, food processing, food preparation, storage, and food consumption.

The capeduncola from House 1

ID. 13970. Monte Polizzo. House 1. Room VI. Height: 17.6 cm. Date: 6th century BC. Fig. 2.

The handle of the vessel is moulded to represent an anthropomorphic figure with a triangular head extending from a human torso. The face has two incised circular

55. Tusa 1990: 44.

56. Spatafora 1996a.

57. Mühlenbock 2008, 2013; Delgado-Ferrer 2011.



Fig. 2: *Id.13920. Anthropomorphic cup from Monte Polizzo dated to the middle of the 6th century BC.*

eyes with pronounces irises. The large round nose is moulded in relief. The neck of the figure is ornamented with two horizontal incised triangles in an hour-glass pattern. A similar, but larger pattern is placed on the torso below the arms. It is tempting to interpret the first decoration as a necklace based on its position. The larger decoration is possibly two breasts. The figure has one raised arm in an upright adorning gesture while the other arm, which originally was held in the same position, has been broken off. The arm is well proportioned in relation to the head. Below the torso, where we on an anthropomorphic figurine could have expected abdomen and legs, the body is transformed to become a rounded cup. The rim of the cup is perforated with three holes on each side of the handle. It is possible that decorative elements were attached to these holes on occasions. At the backside where the handle meets the rim, the two sides of the cup have loops with perforated holes; the loops have wear marks indicating that the vessel could be suspended, potentially in the building where it was found. One additional knob is placed on the front of the cup; it is not perforated and probably placed there to enhance the symmetry of the vessel.

The capeduncola from House 3

ID. 44429, Monte Polizzo, House 3. Room III. ID. Height: 15 cm. Date: 6th century BC. Fig. 3.

The second *capeduncola* is crafted differently. Most of the handle is moulded in one piece. The head is cast as an undefined extension of the body. Two slightly curved and substantial horns, possibly inspired by bovine animal, extend from the head. The eyes consist of three circles with the inner circle defining the iris. The nose is pointed and long, possibly resembling a beak rather than a human nose. The two upraised arms are well defined but they appear tiny in comparison to the rest of the figure. The arms are the only figurative elements which are distinctively anthropomorphic. The upper part of the body is extensively decorated and divided into three fields. The middle field consists of five incised concentric circles. The two flanking fields are filled with small waves. Below the handle the vessel becomes a carinated cup of the local tradition, adorned with *denta di lupo* triangles along the rim.[58] The outer part of the body is encircled by the same wavy lines that we find on the handle. A vertical ridge on the back of the handle probably acted as structural support and could have been used if a person, for some reason wanted to raise the vessel holding it from behind.

Interpretation

The two anthropomorphic cups from Monte Polizzo are excellent examples of the indigenous Iron Age iconography in western Sicily which, with few exceptions, was highly individualized and somewhat enigmatic to the modern observer.[59] The type of media displayed here (applying zoomorphic/anthropomorphic handle attachments on ceramic vessels) had a long history in Sicily deriving at least from the 12th century BC.[60] Apart from the strong emphasis on the uplifted arms it is not easy to find a characteristic which supports cohesion between the representations. Within the artistic framework (the handle attachment) the artists clearly took great pride in experimenting with the various elements in the different representations, both concerning style and ornamentation.

The gender characteristics are obscure and so it is difficult to assess whether the representations fit into any traditional gender category although the decoration on the upper part of the body of the first anthropomorphic cup indicates that this indeed could be a female representation. The second

58. Spatafora 1996, 98; Mühlenbock 2008, 110.
59. Leighton 1999, 261-268; Trombi 2003.
60. E.g Malone *et al.* 1994; Mühlenbock 2013.



Fig. 3: *ID. 44429. Anthropomorphic cup from Monte Polizzo dated to the middle of the 6th century BC.*

anthropomorphic cup, however, is even more obscure. The two horns possibly allude to a male characteristics but its main message is a fusion of human and animal. This general obscurity was most probably intentional showing that displaying gender was not of prime importance. It also appears as if the decoration, or lack thereof, is primarily related to age. In an earlier article I have argued that, based on stylistic evidences, the *capeduncola* from house 3 is older than the *capeduncola* from house 1.[61]

The finds of anthropomorphic cups in three out of five completely excavated households at Monte Polizzo could indicate that most houses possessed an anthropomorphic piece. Since, no anthropomorphic cup, at the moment, have

61. Mühlenbock 2013.

been discovered in other excavated contexts (graves and a sanctuary) at the site, it appears that they were possibly restricted to domestic contexts. From this we can deduce that the prime function of the individual *capeduncola* was tied to the singular house and the family living in it rather than to the community. Therefore, I would suggest that anthropomorphic cups probably did not depict one and the same character; rather we are dealing with objects that were produced to serve and possibly protect households. Because we still have a very limited dataset it is difficult to draw more far reaching conclusions but based on the current evidence it appears as if it is justified to talk about the individual pieces as potent protectors for the individual households. While the raised arms, as a coherent trait, stand out as a strong symbol for cohesion and meaning among the inhabitants on Monte Polizzo.

If we are right, assuming that the *capeduncola* signified the household we can expect that they were utilised in various ceremonies related to the domestic sphere. The *capeduncola* from House 1 was designed to be suspended from the roof, from a wall or something similar inside the area of the house which was designated for storage.[62] The other *capeduncola* was probably displayed in a similar fashion standing on a raised platform inside house 3, in a room which possibly was intended as a small shrine.[63] Both *capeduncole* were possibly responsible for the well-being of the family members, possibly as mediator between gods/goddesses and humans. In this role, particularly considering the proximity to storage vessels, it is possible that the anthropomorphic cups were intended to enhance and promote the production of food and textiles.

Assuming that these human representations partially reflected social aspects of Sicilian society it is interesting to note how these anthropomorphic/zoomorphic representations downplay the role of gender. Gendered aspects were most probably important, but in this case the household members, the family was promoted. The fact that the household was such an important entity to render a specific representation is indicative of a society which holds the family and the household in high regard.

62. Mühlenbock 2008, 133-135.
63. Mühlenbock 2008, 156-157.

Cyprus

The Cypriot site, Ajia Irini, is located not very far from the island's northern coast. Ajia Irini was a sanctuary with evidence of cultic buildings and activities dating back to at least the Late Bronze Age.[64] Swedish archaeologists excavated the site in 1929, here they discovered more than two thousand figurines which were extensively published in the Swedish Cyprus Expedition (SCE) series. Most of the figurines were deposited around the time of a reorganisation of the sanctuary during the 8th century BC. But it is worth observing that there is an abundance of ceramic material that dates to the earliest phases of occupation.[65] The excavators dated some of the bull figurines to the 10th century BC. Most of the Ajia Irini figurines are male warriors, but there are also musicians, charioteers, horsemen, figurines bearing offerings, priests, mythological creatures such as sphinxes and centaurs.[66] What is significant with this collection of images is first of all the strong individuality expressed among many of the larger figurines. Secondly we can discern a number of traits that can be attributed to different areas of the Mediterranean. Warriors wearing Egyptian headdresses can be found alongside stern looking men with beards typical for the Assyrian kingdom in the east.[67] The figurines selected for this study are among the very few female or hermaphroditic representations that we find from the sanctuary.

Ajia Irini ID: 2804. Height: 10,5 cm. Cypro-Geometric III to early Cypro-Archic I. c. 8th-7th century BC. Fig. 4.

This piece is a very typical example of the traditional "goddess with uplifted arms".[68] She is recognised primarily by her gesture, with two raised arms in an adorning position. Furthermore, her head is often embellished with what has been interpreted as a *polos or a high tiara*: head-gear typically worn by most of the early types of the "goddess with uplifted arms". She is constructed in the so called snow-ball technique where individual features were crafted separately and added in the final stage of manufacture. Her facial expression is unusual with its two attached bulging pellet eyes and pellet eyebrows. Her large nose (now chipped) was moulded and her mouth is marked by an incised

64. Gjerstad: 1935, 820.
65. For a detailed discussion see Gjerstad 1935, 815-820.
66. Winbladh 2003, 151-203.
67. Törnkvist 1970.
68. See Karageorghis 1977.



Fig. 4: *Front and back of A.I. 2804. The "goddess with uplifted arms" figure from the Ajia Irini sanctuary in Cyprus dated on stylistic grounds to the 8th-7th century BC but in use until the site was abandoned in the middle of the 6th century BC.*

line. Her trumpet shaped, hollow body is partially restored. Two pellet breasts are attached to the upper part of the torso. The figure has traces of black paint with groups of encircling lines along the body and vertical lines along the back of the *polos*. Vertical, black lines marks coiffure on back of her head.

Ajia Irini ID: A.I. 2316. Height: 36.2 cm. . Cypro-Geometric III to early Cypro-Archic I. c. 8th-7th century BC. Fig. 5.

The second figurine is much more ambiguous but still has the typical posture with the uplifted arms. The figure most probably represents a hermaphrodite with a woman's body and male characteristics such as the moulded and black painted beard. The wheel made, hollow trumpet-shaped body is decorated with two modest pellet breasts. The concave neck carries a square head with a broad chin and large convex nose. The mouth, the eyes, the ridged eyebrows and the large ears are carefully moulded. The eyes, the mouth and particularly the beard are highlighted by black paint. The arms are uplifted in an adorning gesture with the open hands facing the observer. The fingers are marked with faint black paint. A snake curls along the back of the figurine projecting above its left shoulder. Painted black lines on the back of the figure probably depict that the figurine was clad in a girdle and a *chiton*.



Fig. 5: *Front and back of A.I. 2316. A hermaphroditic figure with uplifted arms from the Ajia Irini sanctuary in Cyprus tentatively dated to the 8th-7th century BC but in use until the sanctuary was abandoned in the middle of the 6th century BC.*

(A.I 2316) can, due to the precise measurements taken by members of SCE, be contextually pinpointed on the site. Hence, we know that the hermaphrodite was found a few meters behind the majority of figurines from Ajia Irini. They were standing in a semi-circle in front of the sanctuary's main altar. Together with the hermaphrodite there were a number of other figurines that were distinctly recognisable among the pre-dominantly warrior figurines. For instance we find a small number of animal (bull) statuettes, part of a throne with a sphinx, one lyre playing musician and most importantly three hermaphroditic minotaurs; one with braids and a raised goblet in its right hand. Additionally, the excavators found two, smaller but otherwise similar, hermaphroditic figures with uplifted arms.[69] It therefore appears as if the distance between this group and the majority of statues was deliberate. According to the excavators this group was part of a waste heap.[70] The members of the SCE dated the

69. Winbladh 2003, 168.
70. Gjerstad 1935, 808-809.

hermaphrodite, mainly on stylistic observations, to the 8th or the 7th -century BC.[71]

Unfortunately, we are less lucky with the second figurine (A.I 2804) which was published almost twenty years after most of the other figurines from Ajia Irini.[72] In this process the geographical and contextual relationship got lost.

Interpretation

The artistic variability is accentuated in these two figurines. The smaller statute is clearly more in accordance with the older and more traditional "goddess with uplifted arms" figurines, both concerning size and style. The second figure on the other hand, is more elaborate and naturalistic, more synchronous with many of the other figures and figurines from Ajia Irini.

The smaller figurine is clearly a female and perfectly in accordance with the large corpus of "goddesses with uplifted arms" found in Cyprus. Most of them, with only three important exceptions, derive from sanctuaries.[73] At Ajia Irini, however, the figurine is an anomaly because it so clearly represents a figurative tradition of several hundred years with deep historical roots in Cyprus. In this respect and because we lack an exact find spot it is even possible that she perhaps belonged to the earlier phases of the sanctuary and possibly was re-used, like the Bronze Age bulls, in later Iron-Age ceremonies. Gjerstad believed that she was a product of the 8th century BC, being made simultaneously with most of the other figures from the site. In this case it is probable that "the goddess with uplifted arms" signified a link to the past for the worshipers at Ajia Irini. Possibly, comparable to the situation of the Iron Age sanctuary which purposefully was constructed on top of - and in relation to - the much older Bronze Age sanctuary.

Based on its posture Vassos Karageorghis attributes the second figurine to the same category as the aforementioned "goddess with uplifted arms".[74] Yet its appearance and size is strikingly different. Marie Louise Winbladh refers to this figure as the bearded goddess.[75] This is indeed an apt description but in a similar fashion as the former it is questionable if we *a priori* can assume that she was a goddess. Examples of the "goddess with uplifted arms" used until the Archaic II period often had clearly recognisable attributes such as breasts, uplifted arms, a

71. Winbladh 2003, 167.
72. Gjerstad 1963, 24-25.
73. Karageorghis 1977; 1993.
74. Karageorghis 1977, 21.
75. Winbladh 2007, 49-54.

headdress (polos), a slightly tilted head and painted decoration on the head, face and body. The facial expressions such as eyes, eyebrows, typical spots on the cheeks and mouth are often highlighted with paint. Furthermore, many figurines have either a painted or moulded pendant around their neck, our figure is without headgear. But already from the Cypro-Geometric II there are exceptions, such as the figurine found in a tomb at Lapithos. This figurine has most of the attributes of earlier "goddesses with uplifted arms" but it has a ram's head instead of the face of a female. It is interesting to note that the figurine with the ram's head was found in a tomb, not in a sanctuary.[76]

As we move later into the century the insignia for the "goddess with uplifted arms" became even more schematic.[77] Now it is often the upraised arms which are the most important attribute in identifying the figure as the "goddess". Hence, the later representations became much more individualistic, thus eluding the earlier mould. Such is the case with the second figurine from Ajia Irini which is considerably larger than most figures with uplifted arms from Cyprus. Similar to the Sicilian examples, this figure evades the classical male/female dichotomy combining female and male attributes (breast and beard). Additionally, it has a snake coiling up its back. Hence, it is a rare hermaphroditic image with strong animal conations. Therefore, this figurine, together with similarly hemaphroditic minotaurs forms an interesting group which evades the usual gender stereotypes.[78] It is interesting to note that among the figures with uplifted arms from Ajia Irini (8 in total) all figures are either females or ambiguously gendered. This suggests that the gesture was designated to non-male participants who most probably had a specific role to play.

Katarzyna Zeman-Wiśniewska makes an interesting point claiming that these hermaphroditic figurines reflect a socially accepted negotiation of one's gender role; something which possibly was an important part of the sacred space of the sanctuary: in dancing and other ritualistic performances.[79] The close relationship between this sexually ambiguous figurine and the snake enhances the impression of the transgression even further. Possibly, the general outline of the figurine from Ajia Irini suggests that it was not only able to transgress gender roles but also to communicate with and possibly transform into animal spirits. If we assume that the figurines, at least partially, reflect social roles in Cyprus we find that we must start thinking about what these transcending human/animal representations

76. Gjerstad 1937, 213, pl. XLIX, 5.
77. Karageorgis 1977, Nicolaou 1979.
78. Christou 2009.
79. Zeman-Wiśniewska 2012, 159.

actually mean. We cannot automatically assume that Cypriot society and cult was only centred on holistic and all-encompassing dualities such as male and female or war and fertility. Rather, these images show that the inhabitants of Iron Age Cyprus endorsed a much more complex worldview.

Beyond Sicily and Cyprus

In order to seek answers about why and how the inspiration for the gesture of uplifted arms ended up in Cyprus and Sicily it is inevitable that we turn to Crete. Already in the beginning of this article I mentioned that the "goddess with uplifted arms" probably was introduced to Cyprus from Crete by the end of the 2nd millennium BC. Before that the particular goddess had been a distinctive feature in the cult assemblages of Late Minoan (LM) IIIC cult buildings in Crete.[80] Here, they were part of distinct community sanctuaries and were often placed on benches accompanied by specifically designated cult paraphernalia.[81] Approximately synchronous with the adoption of "the goddess with uplifted arms" in Cyprus around 1200-1100 BC she was subsequently abandoned in official cult in Crete during Early Iron Age in favour of sanctuaries that were more directed towards male terracotta representations.[82]

However, Mieke Prent has observed that, similar to what we find in Cyprus, the gesture with the raised arms continued to exist in other artistic media during the Early Iron Age and well into the 7th century BC; in terracotta- and bronze figurines depicting females.[83] These representations often mimic the gesture of the old form without highlighting or articulating the gesture or the sacred nature of the figure from earlier periods.[84] Furthermore, these figurines are often found in non-religious contexts; in settlements and particularly in tombs. Therefore, Prent suggests that this phenomenon indicates a change of meaning, much the same as Karageorghis has observed for Cyprus. She also believes that that the revival of a traditional image occurred at a time of enhanced cultural and social change.[85]

As an interesting parallel to the Cretan goddess figurines we also find terracotta figurines with uplifted arms in Mycenean contexts. These figurines are generally called PSI figurines alluding to the shape of the Greek letter. They appear in

80. Prent 2009, 231.
81. Gesell 2004.
82. Prent 2005, 467-469.
83. Prent 2009, 234.
84. Prent 2009, 237.
85. Prent 2009, 237.

Late Helladic (LH) IIIB and remain popular until LH IIIC (1300-1060 BC). The Mycenean terracotta tradition developed its own characteristic style but it is also probable that the inspiration for its form originally came from Minoan Crete.[86] Similar to the Minoan versions, the Mycenian Psi figurines often wear a headdress (a *polos* or a high tiara) and have highlighted breasts, the body is often painted in various patterns. The earliest examples are more realistic in nature but the most common type is typically stylistic in its shape with an almost bird shaped face. These figurines were exported, a few have been found in Sicily. French also observes that they also were exported to Cyprus although in comparatively low numbers.[87] But contradictory to what we find in Cyprus and Crete, the figurines with uplifted arms disappeared in the areas previously controlled by the Mycenaeans at the end of the Bronze Age.

From the Iron Age, however, there is a renewed interest in typical figurative representations with uplifted arms deriving from Rhodes, Samos, Lemnos, Boeotia and Attica.[88] During the same period the gesture also appears frequently on depictions from mainland Italy.[89] Here, also a Cretan origin has been suggested.[90] In Calabria we also find figurines with the same gesture dated between the 7th and the 8th century BC.[91] One of the most interesting and intriguing figurines regarding the relationship between Crete, Mainland Greece, Cyprus and Italy were found in a grave in the cemetery of Francavilla Marittima.[92] Here, together with a small child, probably a girl, the excavators found a handmade figurine resembling the "goddess with uplifted arms".[93] The anthropomorphic figurine wears headgear, possibly a *polos*; its head is slightly tilted backwards and both arms are placed in an upright position. Although the figure lacks specific gender attributes, the excavators believe, based on the shape of the headgear that we are dealing with a female.[94] The figurine was placed just above the little girl's head and was probably a protector of the deceased. Additionally, the excavators believe that the figurine was inspired by Cypriot "goddess with uplifted arms" figurines.[95] The important conclusion drawn from these examples is that the gesture with uplifted

86. French 1971, 106; Renfrew 1985, 436; Dickinson 1994, 177.
87. French 1971, 131.
88. Krogulska 1968; Nicholls 1970; Karageorghis 1977, 6; Szabó 1995.
89. Leighton 1999, 266.
90. Müller-Karpe 1959.
91. Orlandini 1971, 282-283.
92. Zancani-Montuoro 1977, 51-55.
93. Zancani-Montuoro 1977, 53, tav. XX:A.
94. Zancani-Montuoro 1977, 53.
95. Orlandini 1971, 277; Zancani-Montuoro 1977, 55.

arms during had gained striking popularity not only in Cyprus, Crete and Sicily but also over vast areas of the eastern and central Mediterranean. It therefore appears as if the gesture, during the Iron Age, had ceased to be associated only with one or a few geographical areas; rather it had been appropriated in many places and in many contexts. This is part of the answer to why the gesture also became popular in Western Sicily.

A Mediterranean body language

There is convincing evidence to support the notion that the gesture with the uplifted arms in Cyprus was inspired by prototypes from Crete. But how exactly did the same gesture reach Western Sicily and the indigenous groups at Monte Polizzo during the Iron Age? This question is much more difficult to answer because beside the gesture itself, there are few apparent similarities. A direct contact between Cyprus and Sicily during the archaic period is not well attested archaeologically although we know that Boetoian merchants were engaged in both islands from an early stage during the Iron Age. Using the same logic, Phoenician merchants were simultaneously directly engaged both in trading relations but also with permanent settlements in both Sicily and in Cyprus.[96] We may tentatively suggest that both groups could have established an emerging cultural link between the two islands. Another suggestion, which perhaps is even more likely, is that no direct link between Sicily and Cyprus was responsible for the simultaneous appreciation for the uplifted arms. Rather, as I have demonstrated above the uplifted arms was such a widespread phenomenon during the 8th-7th century BC that the inspiration to Sicily might have come from Italy, Crete or even from a number of places in the Mediterranean simultaneously.

Considering the many contextual and stylistic differences between the figurative art displayed in this text it would be farfetched to suggest an identical meaning between the figurines from Cyprus and Sicily. On the other hand the three-dimensional representations demonstrate that there were structures in society which were equally important in the two islands, such as the dynamic and fluid nature of gender. Continuity and tradition both obviously played a crucial role in how the figurative elements of the uplifted arms were integrated in societies. In Cyprus, the gesture moved from being an imported phenomenon with strong foreign attachments to a gesture which eventually became integrated and a familiar element in the local cult for hundreds of years. Later the meaning of the gesture was expanded and came to include a more innovative and fluid

96. Aubet 2001.

approach to the cultic performances visible in the hemaphroditic figures from Ajia Irini. We find a similar process in Sicily. After all – both in Cyprus and Sicily the figurative representations were probably used as vehicles to communicate with the world beyond. Possibly with the past but also with the forces which directed the daily lives of peoples. This transgressing nature of the gesture was probably also one of the reasons why it became so popular. It is of course difficult to know if the inhabitants in Cyprus and Sicily knew about the exact nature of its historical meaning but it appears as if the gesture effectively became part of a religious *lingua franca*, a mediating force between different groups in the Mediterranean. If this is correct this is perfectly in accordance with Irad Malkin's suggestion for the role of religion in the ancient world.[97] He describes religion as the universal language while the distinctive names and religious practices constituted the local dialects.[98]

Conclusions

In this case we might deduce that the wide distribution of the depiction of uplifted arms was a result of a highly interconnected Mediterranean. Local history and local practices were clearly responsible for how the goddess with uplifted arms were integrated in the different societies in Sicily and Cyprus – the *dialects*. The gesture itself on the other hand was part of a Mediterranean body language, shared and partially understood by peoples from various parts of the Mediterranean. Crete and Cyprus were no doubt responsible for guarding and maintaining a long-lived tradition. The power and popularity of the gesture was related to this historical and possibly mythical origin. The figurines from the different regions do not only represent a transmission of art but also a common inspiration for real body language and possible transformative action. In Sicily, the gesture became popular much later and here we can expect that the inhabitants on Monte Polizzo embraced the gesture with the uplifted arms partially as a sign of cohesion but also as a desire to belong to a much wider world outside Sicily. Thus, the gesture with the uplifted arms can be understood in relation to what Mauss described initially in this text when young French women in Paris, inspired by Hollywood actresses, adopted a certain way to walk precisely because they also desired to be associated with a bigger, more international world.

97. Malkin 2004, 350; Malkin 2011, 8.
98. Malkin 2011, 8.

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Greeks and the East in the Iron Age: Interpreting interaction in the Eastern Mediterranean

Kristoffer Momrak[1]

Ancient Greeks and the East, their interaction with local peoples and the impact of cultural contacts have been studied extensively in recent years. For the most part, evidence comes from archaeological finds. This means that the situations of interaction have to be reconstructed from sources that give very little information about how such interaction took place. In this article, interpretations of the sites of Lefkandi, Al Mina, and Naukratis will be discussed, including a review of the widely diverging views held on how to explain the findings. The article draws attention to problems regarding the interpretation of sites with artefacts from several different cultures and discusses several models current in archaeology today that produce mutually exclusive narratives of interaction in the past.[1]

Introduction

Interaction has been a popular topic in studies of the ancient world in the last decades, in part reflecting the present state of globalisation and world-wide interconnectivity.[2] As will be discussed in this chapter, the modes and scope of contacts between East and West are disputed. It is important to review the

1. Some of the arguments in this article were presented at the *American Schools of Oriental Research Annual Meeting* 2007 in San Diego, CA, in the paper "Outside of society? Greeks in the East and Phoenicians in the West" held at the session *Eastern Mediterranean Diasporas*. They have been considerably revised for the paper held at the conference *Global and Local – Perspectives on mobility in the Eastern Mediterranean* in Athens 2011. Further revisions have been undertaken for the present article. I am grateful to the *ASOR Annual Meeting* and *Global and Local* organisers and participants for their reactions and comments, as well as for the comments of two anonymous reviewers for the present publication.

2. Largely due to the ground-breaking work of Martin West, Walter Burkert, and Sarah Morris, the prevalent paradigm in archaeology and ancient history sets Greek culture in a close connection with a wider Mediterranean environment (S. Morris 1992; Burkert 1995; ibid. 2004; West 1999 [1997]). This approach to studies of the ancient world is not without precedent. E.g. Cyrus Gordon was convinced that much of Greek culture had its origins in the East (Gordon 1955).

current debates, because reconstructions of Iron Age history in the Mediterranean are coloured by how we assess processes of interaction. The picture of intense exchange and interaction in the Eastern Mediterranean in the Iron Age and wide-ranging influences on Greek culture has been questioned.[3] It is argued that Eastern influences on Greek culture were superficial and transient.[4] In the following, some of the key sites and archaeological evidence for interaction between Greece and the Near East in the Iron Age will be discussed, with a review of interpretations of the history of these sites. I will discuss three sites in the Eastern Mediterranean that are frequently adduced as evidence for Eastern influence on the Greeks or Greek interaction with the East in the Iron Age: Lefkandi, Al Mina, and Naukratis, before I undertake a review of different models that have been used to describe modes of interaction between Greeks and the East.[5]

Lefkandi

At Lefkandi on the island of Euboea, in the Toumba cemetery, archaeologists have found a 10th century building and several examples of Orientalia. Scholars agree on the unexpectedness of the contents of the graves at Toumba: imported grave goods speaking of contacts between Greece and the Near East from the 10th century BC onwards. The site is not yet fully published. As will be seen, interpretations vary widely. Excavations at Lefkandi on Euboea by Mervyn Popham and Irene S. Lemos in the 1980's and 1990's have revealed graves in the Toumba cemetery with rich Oriental imports. The entirety of the site, its graves and finds cannot be reviewed here. I will discuss the interpretations of a few graves that contain Oriental objects, as well as a large building that was used for a burial, starting with the building.

A huge apsidal building at Lefkandi containing a male and female burial has caused quite a stir among archaeologists. The two burials have been interpreted as belonging to a ruling couple, and the building, 45 meters long, to have been

3. This is largely because of inconclusive evidence for Greek settlements in the East in the Archaic period (cf. Waldbaum1994; ibid. 1997; Haider 1996; ibid. 2004).
4. The Greeks supposedly had a culture unique in the ancient world, characterised by citizen communities that ruled their own polities (Raaflaub 1998: 31; Fantalkin 2006: 204).This view conforms to a Classicist view of fundamental cultural differences between East and West, as exemplified by Moses Finley, who emphasised the egregious character of Greek culture, in particular concerning politics (Finley 1983: 53).
5. All dates in the following presentation and discussion follow the periodization of the publications cited. Unfortunately, they tend to be rather imprecise, making chronological correlations with historical events difficult. It is beyond the scope of the present discussion to establish precise dates for the different sites under discussion.

their residence.[6] The apsidal building is frequently referred to as the Heroon, and its male inhabitant has been dubbed the Hero of Lefkandi. Further finds of imported exotica from the Near East at Lefkandi have been used to corroborate the picture of a wealthy community with international contacts. According to Robin Osborne, the wealth contained in the paired burial at Lefkandi, and the sheer size of the building itself, implies a hierarchical organisation of the community. He claims that a small group or family must have been able to extract a surplus from the rest of the community to afford a display like this.[7]

Aside from the size of the building and burial and the presumed need to organise their construction, there is no compelling evidence at Lefkandi for a complex hierarchic society. There is no evidence of writing or other indications for social stratification in the form of a central organisation for the extraction of an agricultural surplus. The possibility that an extended family or lineage could have constructed the large building and subsequent burials as well as imported the various foreign objects should be considered. As will be seen in the following, the significance of the exotic grave goods is difficult to assess.

The foreign imports from Lefkandi have caused much speculation among archaeologists as to their provenance and how they found their way to Euboea. Among the finds is a bronze bowl, from Tomb 55, embossed and engraved with an upper frieze of helmeted and winged sphinxes in between oriental "trees of life". The bowl is further decorated with a row of animals with palm trees around a central rosette. It is Near Eastern in origin, and North Syria has been suggested as a likely source. The burial is dated by a large Attic Early Geometric I *oenochoe*, with a date *c*. 900 BC.[8] An engraved Near Eastern bronze bowl was found in a woman's burial, Tomb 70.[9] According to the excavators, it is comparable to bowls found on Cyprus, and dates to Late Proto-Geometric, *c*. 900 BC.[10] The excavators consider the bowl to be of Phoenician origin.[11] In the same cemetery was a grave, Tomb 79, with contents that include iron weaponry, what is interpreted as weights and scales, a Syrian cylinder seal from 1800 BC, and golden earrings. The cremated ashes of the buried man were collected in a nearly hemispheric bronze cauldron with lid. A *krater*, Phoenician and Cypriote jugs and bronze earrings were also found.[12]

6. Coldstream 1998, 355; Morris 2000, 218-238.
7. Osborne 1996, 43.
8. Popham *et al.* 1988-89, 118.
9. Popham 1995, 103.
10. Popham 1995, 106.
11. Popham 1995, 107, n. 5.
12. Popham and Lemos 1995, 151-157.

These finds have been taken to indicate that the community at Lefkandi, or a part thereof, was in contact with the Near East. However, it should be kept in mind that the majority of graves did not contain foreign imports. The exotic objects come from graves that are dated to different periods, making them even less representative of the graves as a whole. Also, the foreign origins of artefacts do not tell us how they arrived at Lefkandi or why they were deposited in graves. What was the nature of contacts between the community at Lefkandi and the Near East? The preliminary conclusion of the excavators is that Tomb 79 contains the burial of a warrior trader. They suggest that this would explain the connection between Euboea, the Near East and Cyprus. This grave is dated to Sub-Protogeometric II (*c.* 800 BC).[13] The finds at Lefkandi belong to what is considered a Dark Age in mainland Greece, with little contact between Greek communities and the wider Mediterranean world. The international Late Bronze Age world, where Greek communities were very much a part of the Eastern Mediterranean world, collapsed around 1200 BC, and was followed by a more parochial Iron Age. A warrior trader with contacts to the Near East thus does not fit the general view of Greek interaction with the Near East in the Dark Age.

Ian Morris, assessing the finds from Lefkandi, argues that the Lefkandians were one generation before the rest of central Greece in re-establishing contacts with the East after the collapse at the end of the Bronze Age.[14] He attributes the Oriental objects found in the Toumba graves to Phoenician penetration of the Aegean.[15] In his interpretation, finds of Orientalia in 10th century Greek graves are evidence for Heroic aspirations in the local élite.[16] Thus, Morris interprets the Oriental objects at Lefkandi as the result of trade initiated by Phoenicians, eagerly welcomed by local élites. However, to interpret society at Lefkandi as an emulation of the Homeric heroes is rather speculative. The luxury of the households of the Homeric kings cannot be said to be matched at Lefkandi. Not all scholars accept foreign traders as the source of imported goods at Lefkandi. Irene S. Lemos emphasises the initiative of Greeks over Phoenicians in bringing exotic goods to Lefkandi. In her interpretation, Euboeans went to the Phoenician city of Tyre to trade there. Lemos argues that Proto-Geometric pottery is known from Tyre from the 10th century, as well as other Eastern sites, such as Tell Dor, and that they are found in settlements, not graves, indicating trade in goods rather than in prestige items. In her view, the Tyrians were probably not very interested

13. Popham and Lemos 1995, 156.
14. Morris 2000, 239.
15. Morris 2000, 251.
16. Morris 2000, 228-238.

in the Central Aegean in the 10th century. Thus, in her interpretation, the Greek pottery in Tyre and Tell Dor was brought by enterprising Greeks.[17]

Lemos emphasises that the Euboeans at Lefkandi constructed "the earliest monumental building we have so far in the Aegean after the end of the palatial period". In her interpretation, "the building at Toumba above the burials and its destruction is associated with an important political change that took place at Lefkandi around 950, when the whole community decided to undertake the task of filling in and covering the building". An élite group, which was buried at the Toumba cemetery around the building "was well established and was eager to acquire imported goods to reinforce its status" by the second half of the 10th century.[18] Although Lemos places the initiative with Euboeans rather than Phoenicians, her interpretation does not really conflict with that of Morris referred to above. Both Lemos and Morris emphasise that an Euboean élite used foreign goods to show their status in a local context. However, Lemos emphasises the Euboean initiative and downplays any active role of the Phoenicians. Both Morris and Lemos argue that there was a local élite and set the Toumba building and the import of foreign goods in relation to efforts by this élite to distinguish itself. This élite had contacts with Phoenicians through trade. Nicolas Coldstream emphasises regular commercial exchange behind the finds from Lefkandi.[19] Like Lemos, he sets the finds of exotica at Lefkandi in connection with the finds of Greek pottery in Tyre dating to the 10th century.[20] He argues that these Proto-Geometric sherds resemble the earliest finds of Greek pottery at Amathus on Cyprus. Especially frequent in the Levant are Euboean plates decorated with pendent concentric semi-circles, contrasting to only four found at Lefkandi. Therefore, Coldstream assumes an Euboean export-initiative aimed at the Phoenician market.[21] Concerning the finds from the Heroon at Lefkandi, he suggests that the grave goods, including an Old Babylonian seal found with the woman buried in the Heroon, may point to her Near Eastern origin. He suggests that she may have been a queen.[22] Egyptianising bronze vessels found in the Toumba cemetery and objects of faience point to trade with Egypt. According to Coldstream, this trade probably went through Tyre, and he suggests that this may indicate some intermarriage between an élite family in Tyre and the Hero

17. Lemos 2005, 54. The Greek Proto-Geometric pottery from Tyre is published in Bikai 1978, pls. 22 a1, 30.3.
18. Lemos 2005, 56.
19. Coldstream 1982, 265.
20. Coldstream 1998, 353.
21. Coldstream 1998, 354.
22. Coldstream 1998, 355.

of Lefkandi.[23] Coldstream's interpretation credits the Lefkandi community with an international élite that married the daughters of foreign élite families. This, however, cannot be said to be more than speculation.

In Coldstream's view, contact between Euboeans and the Near East was frequent and regular. Rather than seeing Greece as semi-isolated on the periphery of the Near East, he interprets the evidence at Lefkandi as indicative of a high degree of integration between élites East and West, with an emphasis on the early initiative and success of the Euboeans.[24] It should be kept in mind that the site of Lefkandi has offered little in terms of evidence for a complex society with an established élite. Exotica in graves and monumental burials notwithstanding, there is no decisive evidence for the type of internationally oriented ruling élite that Morris, Lemos, or Coldstream assert as the driving force behind the acquisition of foreign objects found in graves. A further problem with the interpretation of Lefkandi as a base for an élite in command of a fleet of daring sea-farers is that it leaves little place for interaction between Greeks and Near Easterners.[25] Models

23. Coldstream 1998, 356.

24. The view of Greek initiative in relations between the East and West has been criticised by John Papadopoulos, who attacks archaeologists for dealing in "Phantom Euboeans". He argues that ideology is the main reason behind the focus on Euboeans as the main agents in contacts between East and West. More precisely, he accuses Classicist archaeologists of anti-Semitism, because of their exclusion of Phoenician or Syrian agents in their narratives of interaction in the Eastern Mediterranean (Papadopoulos 1997, 203-207).

25. Finds from the Cretan site of Kommos can be adduced here: a tri-pillar shrine was discovered in the so-called Greek sanctuary or Temple B, used 800-600 BC (Shaw and Shaw 2000, 14). The tri-pillar shrine is considered Phoenician in form and origin. Wedged between the pillars were a bronze horse and faience figurines interpreted to represent the Egyptian goddess Sekhmet and the god Nefertum (Shaw and Shaw 2000, 21-23). The excavators were unable to determine which divinity or divinities were worshipped at the site, but suggest that Nefertum and Sekhmet indicate some kind of protection offered to the worshippers (Shaw and Shaw 2000, 167-169). At Kommos, a small number of sherds from heavy storage jars of Phoenician origin have been found (Shaw and Shaw 2000, 302). The Phoenician origin of the form of the tri-pillar shrine is established from the distinctly Eastern aniconic form of the central idol. Also, the sanctuary was of an open *naiskos* type, from an "Eastern tradition" (Shaw and Shaw 2000, 693-693; ibid. 711-713). What does it mean that a Phoenician shrine is erected in a Greek sanctuary? The excavators suggest that cultic activities were undertaken at the sanctuary by visiting sea-farers on stop-overs. It was not a permanent Phoenician or Punic settlement at the site. The sanctuary was also used by Greeks (Shaw and Shaw 2000, 712). I find the suggestions of the excavators reasonable and do not see Kommos as evidence of any form of Phoenician settlement on Crete. It is of interest that seafarers appear to have shared sanctuaries and that an Eastern cultic image and architectural plan was established in a local context. Perhaps this is an indication of the fluidity of identities in the 9th century among seafaring people, making a Phoenician sanctuary acceptable at a Cretan site.

for interpreting interaction between Greeks and people of the Near East will be discussed further below. It should also be taken into consideration that although Greek communities evidently had less contact with the East in the Dark Age than in the Late Bronze Age, there is a high degree of continuity in the urban history of the Levant from the Bronze Age into the Iron Age. Sites like Sarepta appears to have been practically undisturbed by the general destruction that took place around 1200 BC.[26] Thus, the Dark Age was not equally dark everywhere. A continuity of contacts in Greece from the Late Bronze Age through the Dark Age should not be ruled out. I turn now to the other side of the coin, viz. an early example of Greek visits to the East in the Iron Age.

Al Mina

Al Mina, at the mouth of the river Orontes in North Syria was excavated by Sir Leonard Woolley in the 1930's. Because of finds of large amounts of Greek Geometric pottery at the site, Woolley regarded it as a Greek colony. More precisely, it was thought to be an Euboean *emporion* or trading settlement in the Levant, and the source of the Orientalising revolution in Greece.[27] It has also been suggested that Al Mina played a key role in the adaption of the alphabet for writing Greek.[28] Al Mina plays an important role in narratives of early Greek travels abroad in the Iron Age, focussing on Greek initiative. According to John Boardman, the proportion of Greek to local pottery at Al Mina must be said to be exceptional for the Levant in the 9th to 7th century.[29] He has calculated the Greek part of the pottery as making out 47% of the total.[30] Other sites showing Geometric Greek pottery in the Levant include Tarsus, Tell Tainat, Ras el Bassit and Tell Sukas, the proportion of Greek pottery never reaching over 5 % of the total pottery.[31] There have also been found some Cypriot wares as well as Levantine or Phoenician ones (Bichrome and Red Slip ware). Other objects are of North Syrian origin.[32] Boardman suggests Euboean initiative in establishing exchange relations with the East, and emphasises the Syrian connection to Greece rather than Phoenician carriers to the Aegean.[33] In his interpretation, Al Mina was

26. Cf. Pritchard 1978.
27. Cf. Boardman 1990, 169-170.
28. Cf. Jeffery 1990, 11-12.
29. Boardman 1990, 175.
30. Boardman 2006, 515.
31. Boardman 1990, 171-75, table 1.
32. Boardman 1990, 175-176.
33. Boardman 2006, 516.

a trading settlement, and the Greek presence was "decidedly a limited concession by the local power".[34] Greeks are also attested at Tell Sukas, 72 km south of Al Mina. From the period *c*. 850-675 BC, the Greek sherds are similar to those at Al Mina, i.e. Euboean and Cycladic.[35] An Ionian female name is inscribed on a spindle whorl dated *c*. 600 BC, found at Tell Sukas.[36] The pottery found at Al Mina has recently been re-classified regarding it provenience. On the basis of this, Gunnar Lehman argues that there was a Phoenician presence at the site *c*. 850 BC.[37] In this same period, the Greeks had started to arrive. There was also found Syrian inland pottery at Al Mina, from the 'Amuq plain.[38]

The interpretations of Boardman and Lehman presuppose that the origins of the pottery tell us who carried it to Al Mina. To equal pots with people is, of course, highly problematic. The presence of Greek pottery does not necessarily indicate the presence of Greeks, and that also applies to the Phoenician pottery at the site. Several hypotheses about the process behind the presence of foreign pottery at Al Mina are possible, with neither the Greeks nor the Phoenicians necessarily playing the role of colonists or itinerant traders. However, what other ways are there to identify agents in the past than to follow the objects? In lieu of texts or inscriptions, pottery is a vital source of information. Without other finds, such as architecture, residency or trade become moot questions. Boardman argues for Al Mina as the source of the flow of goods that "resulted in the main Orientalising revolution in Greek culture in the 8th century".[39] This might well have been the case. At least, Greek trade with the Levant and Syria clearly inspired new developments in Greek art. However, there is no way of telling what kind of interaction the Greek and local people were party to. Was the Orientalising revolution predominantly inspired by objects, or by the observation of the practice of arts and crafts, i.e. people? This is not easy to determine. There are no written sources to why objects manufactured in Greece were fashioned in an Orientalist idiom. Glenn Markoe emphasises the adaptive, rather than imitative nature of the Orientalising of Greek art, from "imported oriental goods on foreign soil".[40] However, there is also the possibility of the acquisition of techniques and motives directly, abroad.

34. Boardman 1999, 155.
35. Braun 1982, 11.
36. Sørensen 1997, 288.
37. Lehman 2005, 83.
38. Lehman 2005, 86.
39. Boardman 2006, 516.
40. Markoe 1996, 50.

The Greeks were clearly a minority at Al Mina. Who else used this port? Gunnar Lehman points out that the Phoenician pottery at Al Mina is similar to that of Tyre, and argues that the port probably had ties to that Phoenician city and its trade connections. He proposes that the population at Al Mina was a mixed community of Greeks and Phoenicians, in addition to local Syrians.[41] The importance of a Greek presence at the site has been questioned, however. Jane C. Waldbaum states that "given the lack of firm evidence for distinctly Greek architecture and burial types, the sporadic inscriptions, and the limited range of imported pottery shapes used primarily as wine-drinking apparatus and as perfume containers, we do not have evidence for a fully Greek cultural context at any site in either Syria or Palestine". Waldbaum therefore questions whether the Greeks made their presence felt in any significant way in the East, or were ignored by the sophisticated Easterners as Western barbarians.[42] David W. J. Gill points out that although Boardman interprets the appearance of Euboean wares as firm evidence of Euboeans being active at Al Mina, "there is an equally strong possibility that non-Euboeans (or even non-Greeks) carried it there".[43] Wolf-Dietrich Niemeier points out that "in the absence of other criteria, the occurrence of Greek decorated pottery, even in larger quantities, is a rather poor indicator of the presence of Greeks in the East".[44] In Niemeier's opinion, the Greeks in Syria in the 8th century BC were mercenaries from Greek élites, not settlers.[45] The model of Al Mina as an encampment of mercenaries is also suggested by R. A. Kearsley, who does not accept trade as the initial purpose for Greek settlement at the site.[46] Thus, a number of hypotheses have been offered to explain the evidence for Greek contacts with Al Mina, from regular trade and settlement to brief visits, agents counting traders as well as mercenaries. It should also be pointed out that there is no mutual exclusion between mercenary ventures and trade. Further, it must be kept in mind that élite mercenaries, if they indeed were the source of Greek pottery at Al Mina, also had retainers. The ships had crews. Although seldom discussed, these people have a role to play in the encounters between Greeks and the East.

As has been seen, the evidence from Al Mina can be used to argue a number of scenarios. One interpretation is focussed on acquisitive and inquisitive Greeks learning new things in the East and transforming them to their own needs. Another interpretation argues for the integration of Greeks into a diverse mercantile

41. Lehman 2005, 86.
42. Waldbaum 1997, 12.
43. Gill 1995, 106.
44. Niemeier 2001, 13.
45. Niemeier 2001, 24.
46. Kearsley 1999, 117-119.

community. A third possibility presents itself: the Greeks were completely peripheral to the local community or the trading community at Al Mina. The material from Al Mina is unlikely to ever be published in full. Thus, questions concerning Greeks in the East cannot be answered from this site alone. Before discussing further models for interpreting interaction between Greeks and the East in the Iron Age, I will briefly present Naukratis, a site from which there is textual evidence for how the Greeks established themselves and why.

Naukratis

Naukratis was a famous Greek trading station on the Canopic branch of the Nile in the Egyptian Delta. As will be seen in the following, scholars do not agree whether Naukratis was a trading post, a proper Greek *polis* on Egyptian soil, or an enclave controlled by Pharaoh. Fortunately, there are texts that mention Naukratis, making it possible to determine the role of the Greeks at the site with a greater degree of certainty than at Al Mina. Naukratis is discussed by Herodotos, who claims that it was founded at the initiative of Pharaoh Amasis by giving Greeks the opportunity to settle. Amasis allowed those who preferred to visit with their ships without settling at Naukratis to raise altars and establish sanctuaries.[47] Herodotos further relates that Naukratis was formerly the only open port in the Nile Delta and all foreign traders had to put to port there.[48] Greek trade with Naukratis is also known from later testimonies to a lost poem of Sappho: her brother Kharaxos plied a trade with Egypt and used of its profits to buy the freedom of the famous *hetaera* Doricha, also known as Rhodopis, who lived at Naukratis.[49] Kharaxos, Rhodopis of Naukratis and the poem of Sappho is also mentioned by Herodotos.[50]

The site of Naukratis was excavated in the 19th and early 20th century and the finds are scattered throughout several museums and collections. Scholars have established that pottery from a wide range of Greek *poleis* ended up at Naukratis, bespeaking a vigorous trade. The East Greek *poleis* probably provided the most active traders. At the site, remains from several sanctuaries were found, including

47. Hdt. 2.178. Scholars agree that Herodotos' date for the establishment of Naukratis is too late (Whitley 2001, 67). Amasis ruled Egypt from 570 to 526 BC. Astrid Möller argues that there has been found Greek pottery fragments at Naukratis that date to the last quarter of the 7th century, making it more likely that the settlement was in existence in the reign of Psammetichos I, thus, before the reign of Amasis (Möller 2000, 188).
48. Hdt. 2.179.
49. Sappho testt. 1, 15, and 16.
50. Cf. Hdt. 2.135.

a temple to Aphrodite and votive gifts. However, no cemetery has been found.[51] 6th century Naukratis should not be called a *polis*, since it did not control its own territory at the onset, being a port set up at the initiative of Pharaoh. However, it appears to have become recognised as a *polis* at a later stage. Astrid Möller argues that Naukratis was no *polis* until the 4th century[52]. In her interpretation, Naukratis was predominantly a port-of-trade under Egyptian control.[53] John Boardman also points out that Naukratis had a different status from Greek colonies elsewhere, e.g. on Sicily: it was a settlement nominally under the authority of Pharaoh. In his interpretation, it had a working population of Egyptians, whereas the Greeks were a mixed lot: "Naucratis attracted the get-rich-quick merchants of East Greece, and their Aiginetan colleagues who ran the business with central Greece. It attracted poets, artists, statesmen, and historians […]".[54] Thus, in Boardman's interpretation, Naukratis was a cosmopolitan Greek port-of-trade with a native resident element that performed manual labour, with trade or amusements as the most important activities of the Greeks resident or visiting. The interpretations of Möller and Boardman both emphasise the role of Naukratis as host to a merchant community hailing from several parts of Greece. Boardman suggests a similarity between Naukratis and modern colonies like Shanghai.[55] Underlying this interpretation is a comparable advantage for the Greeks in establishing themselves in Egypt, being somehow more enterprising or clever than the locals with regards to trade and commerce. Möller's interpretation is more focused on power and initiative lying with Pharaoh. Both interpretations emphasise the role of the Greeks, however, as visiting entrepreneurs. The Egyptian host is either reduced to a resident labourer or a bureaucratic overlord.

Not all scholars agree that trade was the main reason for the presence of Greeks in Egypt in the Archaic period. Peter W. Haider emphasises the role of the Greeks as mercenaries in Egypt and argues that their presence was regulated by the local authorities.[56] In his interpretation, Greek mercenaries who did settle in Egypt had to become assimilated in order to make a career.[57] Thus, Greeks in Egypt are interpreted not as a cosmopolitan jet set of merchants and poets, but as élite mercenaries who established themselves abroad. They became Egyptianised and presumably spread this Egyptianised culture in their home communities at

51. Boardman 1980, 118-129.
52. Möller 2000, 191.
53. Möller 2000, 203-207.
54. Boardman 1980, 130-131.
55. Cf. Boardman 1980, 132.
56. Haider 1996, 114.
57. Haider 2004, 449.

their eventual return. Indeed, this is conspicuous in the spread of the naked male *kouros* in Greek communities, with its typically Egyptian stance.

As has been seen, scholars interpret Naukratis and the role of Greeks in Egypt quite differently. It can be argued that Naukratis was a trading settlement established by enterprising Greeks, eventually becoming a Greek *polis* on Egyptian soil. This is a clearly a colonialist scenario, where permanent settlement follows a period of prospective trading with the locals. Against this interpretation, it can be argued that the Greek presence in Egypt was controlled by Pharaoh, making Naukratis a regulated enclave rather than a colony. It has not been claimed that Naukratis had its own agricultural hinterland. The lack of an independent agricultural hinterland is relevant, since a *polis* that could not support itself, would be at the mercy of the regional authorities. This is a port-of-trade scenario, where trade is the main reason for the existence of a Greek presence in Egypt. A third possibility is to analyse the Greek presence in Egypt as predominantly one of élite mercenaries that made careers in the Egyptian military. This would make Naukratis a bridgehead for Greeks coming to Egypt, without implying any colonial status to the settlement.

In my opinion, Naukratis should be seen as a nexus for interaction between Greeks abroad as well as between Egyptians and Greeks. However, its position as a regulated enclave should not be ignored. Its status as a free port reveals that the Greeks were in Egypt at the mercy of Pharaoh. The importance of learning the Egyptian language in order to get ahead in Egypt should also not be ignored. It is likely that the Greeks in Egypt were more influenced by Egyptian culture than vice versa. Naukratis is a telling example of how difficult it is to establish relations between Greeks and the East, even when there are texts available that discuss the site in question. It seems evident that a Greek bias is underlying several of the models used in the interpretation of the archaeological material, resulting in unlikely scenarios for settlement that largely ignores the East. In the following, different models of interpretation will be presented and discussed, in order to demonstrate the differences of opinion concerning approaches to Greek interaction with the East.

Interpreting interaction

It has been demonstrated above that Greco-centric or colonialist perspectives are wide-spread in modern scholarship on interaction between Greeks and the East. The East is regarded as a source of motifs in the arts that were transformed by the Greeks. The Greeks are presented as traders going to the East for trade. Then, they returned to their home *poleis* with exotic goods. Their relations with locals in Syria or Egypt are of little interest, as the Greeks made deals with the local rulers

and established themselves in their own enclaves. Also, Greeks are interpreted as taking the initiative in establishing trade relations with the East. When Near Eastern people were personally involved with the Greeks, it was in the form of wedding arrangements at the very top of the social hierarchy. With the advent of post-colonial studies and the tremendous impact of the book *Orientalism* by Edward Said, this perspective was challenged.[58] The East cannot be regarded as passive in interactions with the West without revealing an Orientalist bias. However, from the above review of interpretations of the role of Greeks in the East, it is obvious that this paradigm shift has not made much impact on Classical archaeologists. In the following, I will discuss approaches to interaction in the ancient world from outside the field of Classical archaeology that might contribute to a better understanding of Greeks and the East.

A post-colonial perspective can be said to be included in the application of the concept of a world system to the ancient world. Immanuel Wallerstein's world system theory concerning the development of international capitalism is reworked in Andre Frank and Barry Gills' thesis of a five thousand year old world system.[59] In this perspective, interaction between people and its results are more important than the isolated agents and their culture. The world system theory is akin to the concept of globalisation and can be seen as underlying the works of Martin West, Walter Burkert, and Sarah Morris: the Greeks are presented as being under the influence of a constant flux of cultural influences from the East.[60] Globalisation is an ambiguous concept, implying simultaneously multiculturalism, i.e. the co-existence of several cultures side by side, and a melting pot where cultures in contact with each other are transformed. Thus, it is a term that is used to describe very different things. Further, the world system becomes an imprecise term when applied to the ancient world, because it cannot be said to have existed lines of communication or interdependent global economies in any way comparable to the modern world. Thus, both concepts are in danger of obfuscating rather than elucidating the object of study, i.e. interaction in the ancient world. Attention should rather be paid to local exchange systems and processes of interaction. This may be seen in the work of Andrew and Susan Sherratt, who propose a model for the Mediterranean of steadily increasing frequency and intensity of contacts between the Near East, Greece, and the Western Mediterranean.[61] In their framework, trade played a predominant role in tying regions together in a system

58. Said 2003 [1978].
59. Wallerstein 1974; Frank and Gills 1993.
60. S. Morris 1992; Burkert 1995; ibid. 2004; West 1999 [1997].
61. Sherratt and Sherratt 1991; ibid. 1993.

of exchange between the developed centres in the Eastern Mediterranean and an initially underdeveloped periphery in the West, complete with complementary zones of different types of production and regional competition.[62] Ian Morris has followed up this approach to Greek history in a Mediterranean world system by coining the term "Mediterraneanization", as a pun on globalisation.[63] These approaches are commendable because they take into consideration the several local variations in interaction.

Archaeological evidence from a number of sites implies that people were moving and bringing goods with them to foreign places. Theories about exchange systems suggest how these objects were moved and why. However, the different modes of interaction between agents tend to be let out in these models. Trade is treated as a given factor, motivated by gain. However, this does not explain how agents in exchange systems influence each other socially. Colin Renfrew and John F. Cherry suggest that cultural developments can be explained as the result of peer-polity interaction, the mutual competition and emulation between separate and equal communities.[64] In the framework of peer-polity interaction, the local networks between polities were the most important in the shaping of Greek identities.[65] This is no doubt a sensible approach to the developments in Greece in the Archaic period. However, it does place the Greeks in splendid isolation from the rest of the Mediterranean. Renfrew's thesis of peer-polities presupposes that only polities that have a great deal in common will be liable to pull together and influence each other to mutual benefit. This means that Greek culture developed through emulation and competition between Greek polities. Any influences from Greek experiences abroad are ignored.[66] A quite different approach is that of Peter van Dommelen and his theory of hybridisation.[67] Rather than focussing on relations between structurally similar polities within the same culture, van Dommelen emphasises the transforming effects of meetings between different cultures. E.g. colonists and colonised are equally changed by encounters.[68] This

62. Sherrat and Sherratt 1993, 363.
63. Morris 2003.
64. Renfrew and Cherry 1986.
65. Renfrew 1996, 121-126; ibid. 130-136.
66. An approach similar to that of Renfrew is proposed by Marc van de Mieroop to Late Bronze Age palace societies in Syria (van de Mieroop 2005, 126-131). However, different from Renfrew, van de Mieroop's investigation is not restricted to the Greeks, but defined by a region, viz. the Eastern Mediterranean. In my view, this is quite telling of the differences in perspective between scholars of Western and Eastern antiquity.
67. van Dommelen 1997; ibid. 2005.
68. van Dommelen 1997, 309.

approach can explain more than a peer-polity model, since it includes more encounters as being of significance than those with people of the same language and culture. A similar perspective to that of van Dommelen is Chris Gosden's middle ground theory.[69] In this interpretation, the mutual effects of meetings between cultures is emphasised.[70] Encounters are studied in terms of bringing about the mutual transformation of the cultures coming into contact, depending on the intensity of contacts. A similar approach is advocated by Jonathan Hall, who argues that although scholars are forced to work with a certain reification of cultures, this does not mean that this was the experience of the people that belonged to the cultures in question. Rather, he suggests, cultures are created actively, through eclectic processes of learning, assimilation or rejection.[71]

The different models offered for interaction between East and West in antiquity can be summarised thus:

- Colonialism (Boardman 1999; 2006)
- Globalisation (S. Morris 1992; Burkert 1995; 2004; West 1999 [1997])
- World system (Frank and Gills 1993; Sherrat and Sherrat1991; 1993)
- Multiculturalism (Waldbaum 1994; 1997; Kearlsey 1999; Niemeier 2001)
- "Mediterraneanisation" (Morrris 2003)
- Peer-polity interaction (Renfrew 1996; van de Mieroop 2005)
- Hybridisation or middle ground theory (van Dommelen 1997; 2005; Gosden 2006 [2004]; Hall 2004)

These different models should be evaluated according to how well they explain the available data. In my view, any perspective that attributes a passive role to either part, West or East, is bound to fail in explaining interaction: the discussion will deteriorate into who took the initiative, Greeks or Phoenicians, a rather fruitless exercise, since either category represent an unwarranted generalised reification of quite varied groups of agents.

A global history of the ancient world

Near Eastern archaeologists have a quite different interpretation of relations between Greeks and their Eastern hosts than scholars of the Classical world. Rather than emphasising that the Greeks lived in enclaves in Syria, Peter M.

69. Gosden 2006 [2004].
70. Gosden 2006 [2004], 24-28.
71. Hall 2004, 42-46.

M. G. Akkermans and Glenn M. Schwartz propose that the Greeks were part of a "world system" of the Eastern Mediterranean, "where economic, cultural, and ideological contacts […] were frequent and intense".[72] They look at the same material from the Syrian coast that is available to Classical archaeologists, but conclude that "the combination of cultural elements of the coast, as well as Aramaic, Phoenician, and Greek graffiti found at coastal sites argue […] for a multi-ethnic population rather than discrete Greek or Phoenician communities".[73] Rather than looking at separate cultures side by side[74] or a mix of all Mediterranean cultures,[75] the perspective of Akkermans and Schwartz tries to accommodate the totality of actors and see how they contribute to a whole.

In order to analyse agency and interaction, agents must be identified. This identification is always a question of interpretation, often of fairly ambiguous evidence, as seen from the above reviews of Lefkandi and Al Mina. A further problem is to determine the aims and goals of agents. The modes of interaction between foreign arrivals and local people have to be reconstructed. The nature of the evidence, mostly pottery, makes reconstructions of forms of interaction difficult: pottery can be transported by different people than the ones who made the pots. Therefore, as Jane Waldbaum points out, it is necessary to establish a more complete archaeological context, including housing, in order to prove a permanent presence of Greeks at Al Mina.[76] However, is it likely that e.g. Greek traders or mercenaries built their own houses? Further, providing evidence for permanence of residence is not as much an issue as determining the relations between Greeks and locals. How these relations are interpreted is tied to the complex of the Orientalising revolution in Greece. Classicists tend to emphasise the adaption of the Greeks of motifs and technology from the East. However, in this discussion, the totality of the situations of interaction tends to become ignored.

A striking feature of scholarship regarding relations between East and West is the concept of cultural transfer, i.e. knowledge and motifs moving from the Orient to the Occident. Marc van de Mieroop points out a danger with this approach, viz. that scholars regard the Orient as a prelude to Western culture: "the predilection to see the Ancient Near East primarily as a precursor of the Judeo-Christian and Graeco-Roman legacy, tacitly presents the European cultural development as the superior one in the world and measures the relevance of other traditions only

72. Akkermans and Schwartz 2003, 393.
73. Akkermans and Schwartz 2003, 392.
74. Cf. Niemeier 2001.
75. Cf. S. Morris 1992.
76. Waldbaum 1997, 12.

in relationship to it".[77] Indeed, there is a tendency to study e.g. the transfer of the alphabet to the Greeks with regard to a specific moment or place of transfer rather than as a process of interaction. The Near East forms a background or substrate from where knowledge and technology is culled for later refinement by Europeans. Rather than regarding Greece and the Near East as parts of the same story, the East becomes a prelude to the story of the West. This line of thinking can be found as early as Herodotos: he regarded Egypt as one of the most ancient cultures in the world.[78] In his narrative, Egypt is the source of much of Greek culture, including the pantheon of twelve gods and their cults.[79] The idea of the East as the source of the West was developed by Hegel into a story of the East as the cradle of the West: Hegel claims that "die Weltgeschichte geht von Osten nach Westen, den Europa ist schlecthin das Ende der Weltgeschichte, Asien der Anfang". In Hegel's interpretation, like the physical sun rises in the East, so does history begin there and as the sun sets in the West, so does history have its end point there: "dafür steigt aber hier die innere Sonne des Selbtbewußtseins auf, die eine höhere Glanz verbreitet".[80]

In Hegel's scheme, the East is the land of morning and mankind's childhood, whereas the West is where freedom for all is realised, through an inner sunrise of the awareness of the self. Of course, the analogy of history and the sun only works from the perspective of Western Europe. Seen from e.g. America, the sun rises in Europe and sets over the Pacific. However, this kind of schematic thinking on the history of the world's cultures as a prelude to the West has proved tenacious. It invites comparison between East and West, but only from a Western perspective, as a comparison between undeveloped and developed, or immature and mature cultures. Western culture has no real relation to the East. Technical skills may well have been transferred and adapted by Westerners, but the East is merely the source of this knowledge. Europeans take what they need from the abundance of the ancient Near Eastern cultures and transform it in their own culture. The narrative has no place for a continuous interaction between East and West. Rather, Europe is like a Phoenician princess abducted by Greek seafarers.[81] Cultural traits are envisaged as being taken aboard Greek ships like so many abducted women.

77. van de Mieroop 1997, 288.
78. Hdt. 2.2.
79. Hdt. 2. 4; ibid. 2.50-82.
80. Hegel 1970 [1832-45], 134.
81. Cf. Hdt. 1.2.

Conclusions

Odysseus and Kharaxos are the two archetypes of Greeks in the East, being adventurers and traders on brief visits. The lack of written sources for alternative scenarios contributes to the tendency for all sites with Greek artefacts to be interpreted from Greek perspectives, as places where the Greeks went for war or business. Interpretations of the role of Greeks abroad in the Eastern Mediterranean can be inspired by the Homeric epics, with the warrior-pirate Odysseus as the prototype Greek visitor, or Alkaios, with his brother the mercenary Greek in Babylonia,[82] or Solon, as the learned traveller eager to experience foreign ways,[83] or Sappho, with her brother the trader going to Naukratis to buy the freedom of a famous *hetaera*.[84] The problem with these approaches is that they exclusively explain Greek artefacts from the confrontational perspective of a passive East and an aggressive, inquisitive or acquisitive West.

Finds from burials at Lefkandi on Euboea dated to around 900 BC suggest that there was contact between Greeks and people from Syria and the Levant. This contact has been interpreted as evidence for trade, diplomatic missions, and even migration, but the significance of the site for Greek culture in the Archaic period is hotly disputed. Finds of Greek pottery at Al Mina were for a long time taken as evidence for an early Greek colony in Syria. Trade was seen as the main activity at the site and through this trading station or colony, new motifs in the arts as well as new technology supposedly reached Greece from the Near East. Thus, Al Mina has been regarded as the source of the Orientalising revolution in Greek art. Recent analyses challenge this interpretation, however. Naukratis has played an important role in theories of cultural exchange between Greece and Egypt, held to have had the status of a free port where artists, intellectuals and adventurous merchants rubbed shoulders. However, recent research suggests that Naukratis was not a Greek *polis* on foreign soil, but an enclave for foreign traders established and controlled by Egypt. The sites Al Mina, Lefkandi, and Naukratis have all been interpreted in a range of different ways over the last decades. Scholars do not agree on the forms of interaction at these sites, the identity of the agents involved, or the significance of the sites for cultural developments in Greece or the East. The shifting paradigms in the interpretation of Greeks abroad in the early Archaic period, from colonial scenarios to multiculturalism, invites a comparison between the ancient Greeks and Western academics in post-colonial discourse: the Greeks at Al Mina have gone from colonial explorers in an exotic

82. Alc. 48; Alc. 350.
83. Hdt. 1.29-30.
84. Sappho 202.

East to barbarian mercenaries at the outskirts of the cradle of civilisation, quite analogous to the paradigm shift from a Eurocentric to a global perspective on history. However, as has been seen from the brief review of the interpretations of Lefkandi, Al Mina, and Naukratis, this change in perspective has brought no new consensus on how to interpret the nature of interaction in the Eastern Mediterranean in the Iron Age. More research is needed that takes the East and the West into consideration together.

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